

COUNTY PALATINE OF LANCASTER.

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# REPORT

OF THE

## MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1914,

WITH STATISTICAL INFORMATION  
AND SUMMARY OF REPORTS OF DISTRICT  
MEDICAL OFFICERS OF HEALTH, &c.

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*(Presented to the County Council, November 4th, 1915.)*



PRESTON:

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MCMXV.



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# PUBLIC HEALTH AND HOUSING COMMITTEE (1915).

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The Chairman of the County Council:

\*Sir William Scott Barrett, Knight.

The Vice-Chairman of the County Council:

\*Sir Henry Hibbert, Knight, M.P., D.L.

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*Chairman of Committee:*

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*Vice-Chairman:*

\*C. J. Trimble, Esq., C.M.G.

(\*County Aldermen.)

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## (1915).

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The Chairman of the County Council :

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The Vice-Chairman of the County Council :

\*Sir Henry Hibbert, Knight, M.P., D.L.

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# REPORT

## OF THE

# MEDICAL OFFICER OF HEALTH

For the Year ended December 31st, 1914.

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*To the County Council of the County Palatine of  
Lancaster.*

Mr. Chairman and Gentlemen,

I have the honour to present for your consideration my Twenty-sixth Annual Report on the health, sanitary condition, and administration of the Administrative County of Lancaster, together with condensed summaries of the Annual Reports for the year 1914, received from district Medical Officers of Health.

It is satisfactory to report that the principal vital statistics compared favourably with preceding years. The birth-rate, however, which corresponded to 22·02 per 1,000 of the estimated population, was fractionally lower than last year, and 1·73 below the average of the preceding decade. The fall in the County birth-rate since 1891 represents 9·9 per 1,000. The general death-rate, 13·95 per 1,000—uncorrected for age and sex distribution—was 0·25 below the rate for 1913, and 0·33 lower than the average of the ten years 1904-1913. The epidemic death-rate, 1·25 per 1,000 of the population, and the infant mortality, 112 per 1,000 registered births, were also more favourable than the rates of 1913, due principally to the very considerable reduction in the number of deaths from



diarrhoeal diseases. The death-rate from pulmonary tuberculosis was fractionally—0·05—in excess of last year's average. Infectious disease notifications in 1914 show a marked increase owing mainly to the excessive prevalence of scarlet fever, and to a lesser degree, to the increase in the number of diphtheria cases.

Since the compilation of my last report, the Local Government Board have issued several important Orders and Circulars affecting the public health, for instance, the Ophthalmia Neonatorum Regulations operative from 1st April, 1914; the Shell-fish Regulations, 1st March, 1915; Memoranda and Circulars respecting Maternity and Child Welfare. The Milk and Dairies Act received sanction of Parliament 10th August, 1914, but its operation has been postponed until after the termination of the war.

The Local Government Board have also issued a Circular to County Councils and Sanitary Authorities urging the great importance of maintaining the efficiency of the sanitary services of the country during the present war crisis, stating, "it is essential that there should be no relaxation of the activities of Local Authorities in the prevention and control of epidemic diseases, the protection of the water supplies from contamination, and the promotion of child welfare, and in securing the wholesomeness of food supplies, and the general sanitary condition of each area." By a later circular the Board, whilst requesting Local Authorities not to unduly relax the standard of public health administration, state they should, as far as possible, refrain from requiring the execution of work, unless such work is urgently needed for the removal of nuisances or for the protection of health.

Greater attention than usual has been given to matters relative to the housing of the working classes, but many schemes are necessarily in abeyance owing to the war. As

soon as circumstances permit these schemes should be proceeded with, as the effects of insanitary and overcrowded dwellings are detrimental to the health and character of their inhabitants; in this class of property the rearing of a vigorous race is practically impossible.

The administration of the Midwives Act has resulted in increased efficiency being shown by the majority of midwives, and there is evidence of a desire to comply with the requirements, but with over five hundred untrained women on the Register, frequent contraventions are inevitable.

Annual Reports and Statistical Tables were received from Medical Officers of Health of all the County districts—123 in number; 121 reports were printed and two type-written. Considerable inconvenience and trouble is annually experienced by the fact that, in many instances, the Local Government Board tables are not correctly compiled; the various tables should, in certain respects, agree with each other, and before preparing the statistics a careful perusal of the “notes” on the tables is highly desirable. The last report was not received until August 27th, 1915. Special reports supplied during 1914 under the Sanitary Officers’ Order, 1910, Article XIX. (16), numbered 132, against 171 in the preceding year. These reports have been epitomised in my quarterly reports.

Quarterly Returns giving particulars respecting deaths and cases of infectious diseases have been supplied by all District Medical Officers of Health, who also furnish me with weekly returns of notified cases, &c. I take this opportunity of again expressing the thanks of the County Public Health and Housing Committee, and also my own appreciation of the ready assistance rendered to me at all times by the local Officials.

From the Exchequer Contribution Account payments have been made towards the salaries of Public Health Officials under Section 24 of the Local Government Act, 1888, to the Councils of 17 boroughs, 85 urban districts, 19 rural districts, and 2 port sanitary authorities. The total payments during the financial year ended March 31st, 1915, amounted to £11,566 13s. 8d., of which £5,057 8s. 7d. was in respect of Medical Officers of Health, and £6,509 5s. 1d. for Sanitary Inspectors.

I am, Gentlemen,

Your obedient Servant,

EDWARD SERGEANT,

County Medical Officer of Health.

Preston, 21st October, 1915.

# THE COUNTY.

---

**Area.**—The area of the Administrative County on the 31st day of December, 1914, was 1,055,395 statute acres.

No change affecting the total area of the County took place during the year, but the County Council, under the provisions of the Local Government Acts, 1888 and 1894, made five Orders altering the boundaries of certain townships shown below, the Orders in each instance being confirmed by the Local Government Board.

Burnley (R.).—10th March, 1914, an area of 77 acres, containing a population of 70, transferred from the township of Cliviger to the township of Worsthorpe-with-Hurstwood.

Lees—Limehurst (R.).—30th March, 1914, the township of Crossbank, Limehurst (R.), with an area of 86 acres, and a population of 1,360, added to the urban district of Lees.

Grange-over-Sands—Ulverston (R.).—1st April, 1914, portions of the townships of Broughton East and Allithwaite Lower, representing an area of 322 acres and a population of 26, transferred to the Grange-over-Sands urban district.

Ormskirk—Lathom and Burscough.—17th August, 1914, an area of 19 acres, known as The Ruff, Lathom, added to the urban district of Ormskirk.

Prescot—Whiston (R.).—17th August, 1914, an area of 112 acres in the township of Whiston transferred to the Prescot urban district.

The acreage of each district, given in the summaries of district reports, and in the statistical tables appended (pages 224 *et seq.*), has been extracted from the Report of the Census 1911, the areas having been furnished to the Registrar-General by the Ordnance Survey Department.



**Population.**—The aggregate population of the districts comprising the Administrative County, according to the estimates prepared by the local Medical Officers of Health and used in their Annual Reports for 1914, was 1,748,289, or 17,162 more than the estimated population at the end of the previous year. Estimates of population during intercensal periods are usually based on the supposition that the rate of increase or decrease during the preceding intercensal period has been maintained, but occasionally other factors, such as the establishment of large industries, and consequent influx of workpeople and their families must be taken into account. The population used in the calculation of statistics in the County report for 1913 was 1,749,659, but this included a population of 18,532 lost to the Administrative County in November, 1913, by the extension of County Boroughs. At the Census in April, 1911, the enumerated population was 1,739,320 ; since that date the excess of births over deaths corresponds to 55,879, but the absorption of County districts, or parts of districts, by County Boroughs, represents a loss of population equal to 37,868. Further, it should be noted that the Census figure included the inmates of several large public institutions, used partially for the reception of persons from districts outside the Administrative County, such as the County Asylums at Lancaster, Prestwich, Rainhill, Winwick, and Whittingham, and Poor Law and other Institutions at Fulwood, Wardle, Blackburn (R.), &c. These Institutions collectively had at the end of 1914 a population of 15,070, which total has been deducted from the population of the districts in which they are situated, and from the County total used in this report, as the majority of the persons dying within the Institutions belonged to County Boroughs to which the deaths have been allocated under the scheme now in operation of dealing with “transferable deaths.”

Tables I. and III. appended give the Census and present estimated population of each urban and rural district.



From the whole of the districts—123 in number—reports and statistical tables have been received, and a summary of each report is given on pages 1 to 222 of this report.

The table below gives particulars as to area, population, persons per acre, &c., of the County at the end of the year, distinguishing the boroughs and urban and rural districts :—

	Area in Acres of districts dealt with in this report.	Population Estimated by Medical Officers of Health, 1914	Persons per Acre.	Acres per Person.
Municipal Boroughs (18)	77,983	561,278	7·19	0·13
Urban Districts (86) ...	262,213	949,535	3·62	0·27
Rural Districts (19).....	715,199	237,476	0·33	3·01
Administrative County...	1,055,395	1,748,289	1·65	0·60

**Births** registered in the Administrative County during the year under report, after allowing for transfers under the system of the Registrar-General now in vogue, amounted to 38,507—in the urban districts 33,531, and in the rural districts 4,976. As compared with the year 1913, there was a decrease of 383 in the urban districts, but an increase of 46 in the rural districts, a net decline of 337.

The sex of the children born is shown below :—

	Males.	Females.	Total.
Urban Districts .....	16,955	16,576	33,531
Rural Districts .....	2,546	2,430	4,976
Administrative County ...	19,501	19,006	38,507

The male births are again more numerous than the female births, the excess corresponding to 1·29 per cent., against 0·63 per cent last year, and 1·05 per cent. in 1912. In the whole County the births of males were to those of females as 1,026 is to 1,000, in the urban districts as 1,022 is to 1,000, and in the rural districts as 1,047 is to 1,000. In the preceding year the County proportion of male to female births was as 1,012 is to 1,000.

The table below gives the County urban and rural birth-rates for the year under report, compared with the preceding ten years ; the annual birth-rates for England and Wales are also shown :—

	Rate per 1,000 of the Population.										
	1914.	1913.	1912.	1911.	1910.	1909.	1908.	1907.	1906.	1905.	1904.
Urban Districts	22'19	22'41	22'09	22'88	22'47	23'67	25'05	24'47	25'11	25'22	25'66
Rural Districts..	20'95	20'86	21'42	21'15	22'52	22'91	23'60	22'60	24'22	23'99	24'90
Administrative County .....	22'02	22'20	22'00	22'64	22'48	23'57	24'86	24'23	24'99	25'06	25'56
England and Wales.....	23'8	23'9	23'8	24'4	24'8	25'6	26'5	26'3	27'0	27'2	27'9

The table shows an almost continuous decline both as regards the County and the whole Country, the County rate, with the exception of 1912, when it was 22·00, being the lowest on record. As compared with last year, the County rate declined 0·18 per 1,000 of the population, the urban rate 0·22, whilst there was a slight rise in the rate for the rural districts equal to 0·09. The rate for England and Wales in 1914 was 1·8 above the County average.

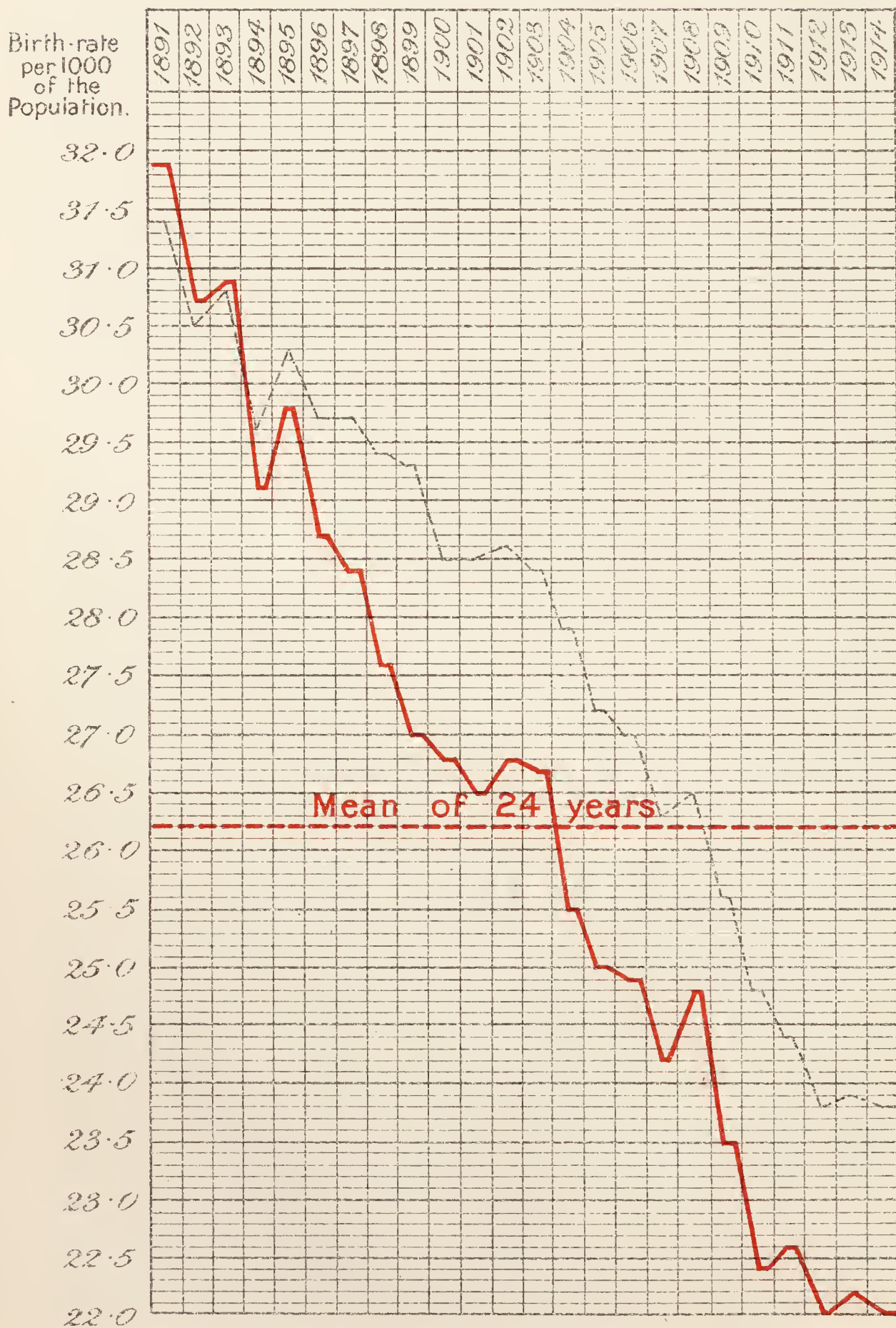
The average County birth-rate for the decennial period 1904-1913 was 23·75 per 1,000—in the urban districts 23·90, rural districts 22·81 ; the County rate, therefore, showed a decline in 1914, equal to 1·73 per 1,000, 1·71 in the urban districts, and 1·86 in the rural districts.



Nº 1.

DIAGRAM SHOWING THE BIRTH RATE PER 1000 OF THE POPULATION  
IN THE ADMINISTRATIVE COUNTY (RED), AND FOR  
COMPARATIVE PURPOSES ENGLAND AND WALES (BLACK).

1891 - 1914.





The following statement shows the birth-rate for the Administrative County for 1914, compared with the three preceding quinquennia :—

1899-1903	...	...	26·81
1904-1908	...	...	24·94
1909-1913	...	...	22·57
1914	...	...	22·02

The Registrar-General reports that the birth-rate for England and Wales in 1914 was 23·8 per 1,000 of the population. Compared with the ten years 1904-1913, the birth-rate in 1914 showed a decrease of 2·1 per 1,000.

Diagram No. 1 appended illustrates the fall in the County birth-rate since 1891, and compares year by year the rate with that of England and Wales ; the fall in the birth-rate during the period named represents as regards the County 9·9 per 1,000 of the population, and 7·6 for England and Wales.

The continued decline in the birth-rate which, as shown in the Diagram, has reached the lowest level hitherto recorded, is from a national point of view to be deplored, and there is little doubt that much of the decline is due to the deliberate limitation of families, either from provident or selfish motives ; on the other hand, however, a low birth-rate often has a compensating factor, in that the children born are healthy, and being reared under better conditions, a greater percentage survive than in many districts in which the birth-rate is much higher. One point, however, is clear, with a steadily diminishing birth-rate, it more than ever at the present time behoves Sanitary Authorities to do all in their power to preserve the lives of the infants born, and by every available means to ensure, as far as possible, that the lives of the survivors are not endangered by unhealthy housing conditions, and they should without delay take steps to remedy the many insanitary conditions which still exist and are a constant menace to the health of infants.



The prosperity of our great Empire depends largely on the production of strong healthy children, and the continued decline of the birth-rate is well worthy of the serious attention of the legislature. The economic and social reasons which have brought about the decline need not be discussed here, but its importance is apparent when it is stated that the number of births registered in England and Wales in 1914 numbered 878,882, whilst if the birth-rate of 1876 (the year from which the decline dates) had held good the number of births would have been 1,346,719.

Tables I. and III. appended give the birth-rate of each urban and rural district ; comparison with the averages for 1913 shows that in 47 districts there was a rise in this rate, but in most instances the increase was only fractional.

The highest birth-rates in 1914 were recorded in Ince-in-Makerfield 37·3, Litherland 32·5, Little Crosby and Haydock each 30·8, Ashton-in-Makerfield 30·5, Widnes (B.) 30·4, Golborne 30·3, and Hindley 30·2 ; whilst low rates obtained in Wardle 13·9, Lytham and Fulwood each 13·4, Morecambe (B.) 12·9, Heysham 12·8, St. Annes-on-the-Sea 10·5, Grange-over-Sands 8·8, and Bispham-with-Norbreck 8·7. In 4 districts the birth-rate was lower than the death-rate.

The eight districts given above as having the highest birth-rates, averaging 31·8 per 1,000, produced a death-rate of 15·9, and an infant death-rate of 127 per 1,000 births, whilst the districts with low birth-rates, averaging 12·3, had a death-rate of 11·5, and an infant rate of 80.

The Registrar-General in his 76th annual report refers to the fact that the birth-rate in this country attained the highest point on record in 1876, viz., 36·3 per 1,000, since which date the ratio has, with a few insignificant exceptions, fallen year by year. Statistics show that the proportion per cent. of married women in the female population aged 15-45

years has fallen from 49·6 in 1871 to 47·7 in 1911 ; of married women aged 20-25 years, the proportion per cent. has during the period named (1871-1911) declined from 13·9 to 9·4, whilst the percentage has increased of married women aged 25-35 and 35-45 years from 45·5 and 39·3 respectively to 46·0 and 44·1. Persons married per 1,000 marriageable persons in the population in 1871 was 56·9, against 46·2 in 1911.

**ILLEGITIMATE BIRTHS.**—From 116 districts information has been obtained concerning 1,225 births of illegitimate children, corresponding to 3·41 per cent. of the total births in these districts ; in 1913, from similar details obtained from 118 districts, the percentage was 3·33. From 90 districts particulars have been supplied in 1914 concerning the deaths of illegitimate children, and it appears that of 1,059 illegitimate children born in these districts, 220 or 20·7 per cent. died before reaching the age of one year ; the total infant death-rate of the whole County corresponded to 11·2 per cent. of the total births. In 1913 the percentage of infant deaths to total births was 12·4, and 23·9 amongst illegitimate children. The highest mortality amongst illegitimates in 1914 was obtained in Haydock 11 births 6 deaths, Leigh (B.) 31 births 11 deaths, Litherland 15 births 6 deaths, Orrell 5 births 6 deaths (including one child born in previous year), Skelmersdale 5 births 3 deaths, Swinton and Pendlebury 20 births 9 deaths, Worsley 4 births 4 deaths.

**Deaths.**—During the year under report the total number of deaths registered in the Administrative County, allowing for the necessary transfer corrections, was 24,392, or 470 less than the corrected total in 1913. The natural increase, or excess of births over deaths, corresponded to 14,115, against 13,982 last year.

The sex distribution of the persons dying in 1914 is shown

in the following table :—

	Males.	Females.	Total.
Urban Districts .....	10,898	10,517	21,415
Rural Districts .....	1,588	1,389	2,977
Administrative County ...	12,486	11,906	24,392

For many years the male deaths in the County have exceeded the female deaths, and 1914 was no exception, the respective percentages being 51·18 and 48·81, a difference of 2·37 ; in the urban districts the excess corresponded to 1·77, and in the rural districts 6·69. In the whole County the deaths of males were to those of females as 1,048 is to 1,000 ; in the urban districts as 1,036 is to 1,000, and in the rural districts 1,143 to 1,000. In the year 1913 the proportion was—County 1,052, urban 1,045, rural 1,103 to 1,000.

The Registrar-General, commenting on the disparity in sex mortality, states in his 76th report that “ the ‘standardized mortality’ of males in 1913 exceeded that of females by 23 per cent. Up to 1860 or so, the excess was only about nine per cent., but for the last 15 years it has averaged about 20 per cent. Since 1841-1845, the ‘standardized mortality’ of females has fallen by 39·4 per cent., while the fall in that of males has been only 31·5 per cent. Statistics show the excess in the mortality of males exists at all ages except in the years of childhood, when mortality is at its minimum. The excess, however, is very unequally distributed, being large in infancy, negative in childhood, then gradually increasing to a maximum in later middle life, and from this declining again with advancing age.”

The County deaths in 1914 at various age periods are given below :—

Under 1 Year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Total.
4,338	1,193	1,022	979	1,045	3,207	6,046	6,562	24,392



The following table shows the County birth and death rates as compared with England and Wales :—

		Birth-rate per 1,000 of the Population.	Per 1,000 of the Population.		Death-rate from the Principal Epidemic Diseases.	Rate of Infant Mortality measured by the proportion of deaths of infants under 1 year to 1,000 births.
			Urban Death-rate.	Rural Death-rate.		
England and Wales .....		23·8	*14·30	†13·4	1·21	105
			‡13·7			
Administrative County of Lancaster {	Urban .....	22·19	14·17	...	1·33	115
	Rural .....	20·95	...	12·53	0·79	96
	Urban and Rural Districts combined	22·02	§13·95		1·25	112

\* Refers to the 97 great towns and 145 smaller towns.

† Refers to the remainder of the country, including the small urban districts and the rural districts. } Not corrected.

‡ Corrected for age and sex distribution of population.

§ Corrected rate 14·74, see page xxii.

|| Includes deaths from diarrhoea and enteritis amongst children under 2 years of age. The County epidemic rate includes such deaths at *all* ages.

The gross or uncorrected death-rate for the Administrative County in 1914 was equal to 13·95 per 1,000 of the estimated population, 14·17 in the urban districts, and 12·53 in the rural districts, as compared with the following rates in 1913—County 14·20, urban districts 14·39, rural districts 13·00, the averages for the year under report being more favourable to the extent of 0·25 per 1,000 for the whole County, 0·22 in the urban districts, and 0·47 in the rural districts.

The following table gives the annual County death-rates and those for England and Wales from 1904-1914 :—

	Rate per 1,000 of the Population.										
	1914.	1913.	1912.	1911.	1910.	1909.	1908.	1907.	1906.	1905.	1904.
Urban Districts	14'17	14'39	13'76	15'33	12'83	14'08	14'61	14'59	14'81	14'52	15'78
Rural Districts	12'53	13'00	12'60	13'25	12'09	13'11	13'31	13'11	13'33	12'99	13'81
Administrative County	13'95	14'20	13'61	15'05	12'73	13'96	14'45	14'40	14'62	14'32	15'54
*England and Wales... ..	13' 7	13'4	13'0	14'6	13'4	14'5	14'7	15'0	15'4	15'2	16'2

\* Corrected for age and sex distribution.

The County death-rate for 1914 was, with the exception of the years 1912 and 1910, the lowest recorded. The average County death-rate for the ten years 1904-1913 was 14·28 (urban districts 14·46, rural districts 13·06); the rate for 1914 was, therefore, more favourable to the extent of 0·33 per 1,000 (urban districts 0·29, rural districts 0·53).

The County death-rate for the three preceding quinquennia compared with 1914 is shewn below :—

1899-1903	...	...	16·31
1904-1908	...	...	14·66
1909-1913	...	...	13·91
1914	...	...	13·95

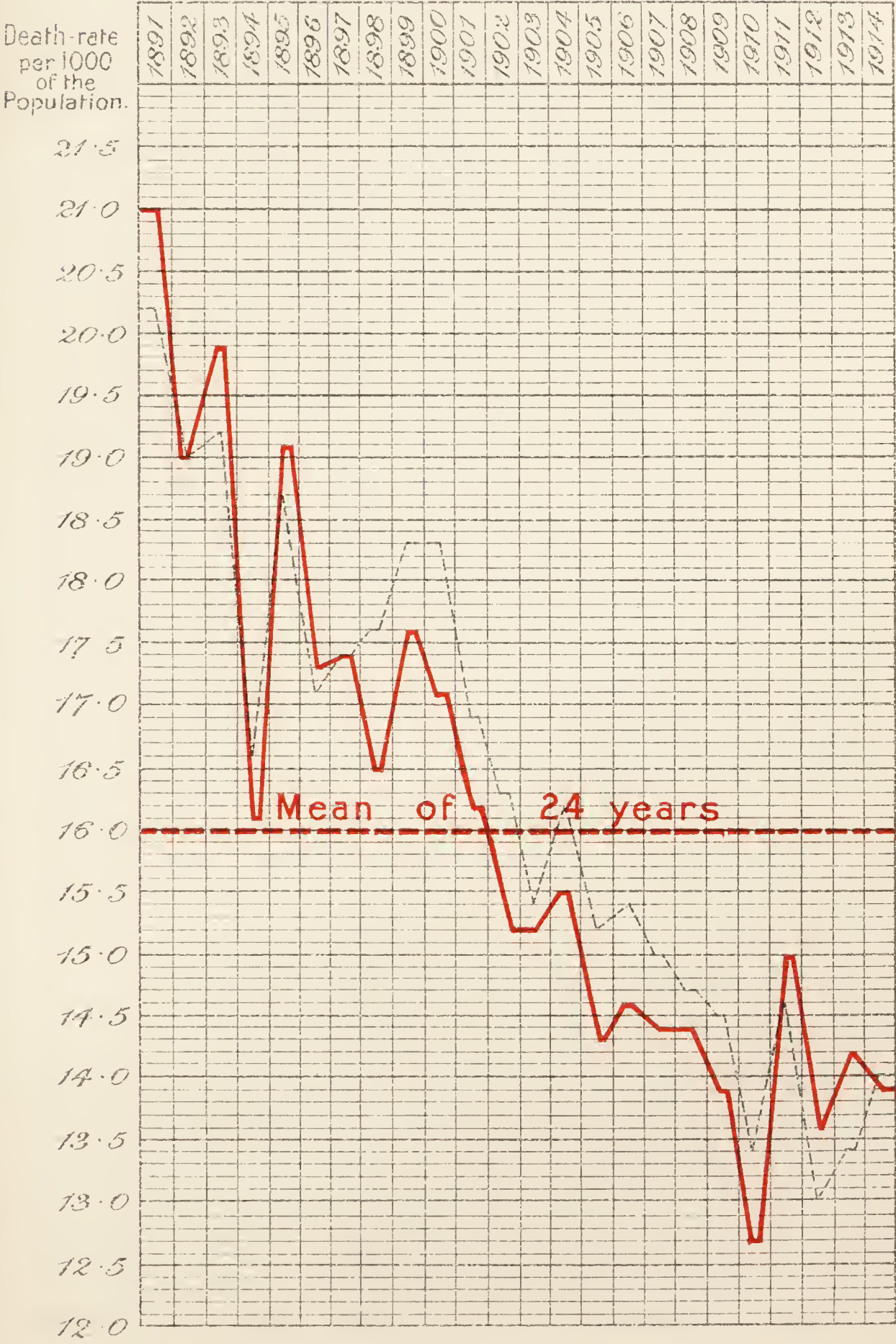
The “ uncorrected ” death-rate for England and Wales in 1914 was 14·0 per 1,000, and the “ corrected ” or “ standardized ” rate 13·7, the former being 0·1 per 1,000 above the corresponding County average, but the latter 1·0 below the “ standardized ” County rate. Reference is made on page xxi. to the method of adjustment of death-rates on account of the varying age and sex distribution.

Diagram No. 2 shows the County death-rate for the 24 years 1891-1914, compared with that of England and Wales ; it will be observed that the fall in the County rate during the



DIAGRAM SHOWING THE DEATH RATE PER 1000 OF THE POPULATION  
IN THE ADMINISTRATIVE COUNTY (RED), AND FOR  
COMPARATIVE PURPOSES ENGLAND AND WALES (BLACK).

1891 - 1914.





period covered by the diagram corresponds to 7·14 per 1,000 of the population.

The “gross” and “standardized” death-rates of each of the County districts, together with details of the deaths, are given in Tables I. to IV. appended (pages 224 to 247). In seventeen districts the “standardized” death-rate exceeded 17·0 per 1,000 of the population, viz., Ince-in-Makerfield 21·8, Ashton-under-Lyne (B.) and Orrell each 19·9, Heywood (B.) and Royton each 19·0, Bacup (B.) 18·7, Little Lever and Milnrow each 18·5, Widnes (B.) 18·3, Lees 18·2, Billinge 18·1, Litherland 17·9, Hurst 17·8, Oswaldtwistle and Wardle each 17·2, Abram and Ormskirk each 17·1. Low rates were recorded in Thornton, Garstang (R.), and Warrington (R.) each 10·5, Great Crosby 10·4, Fylde (R.) 10·1, Upholland 9·9, Croston and St. Annes-on-the-Sea each 9·7, Morecambe (B.) 8·9, and Grange-over-Sands 6·9. It should be borne in mind that too much reliance cannot be placed on the death-rates for a single year of districts with small populations, as they are liable to considerable fluctuations. The “uncorrected” average for each district, covering a period of ten years, is shown in the appended summaries of reports; the following districts give the highest ten years’ rates:—Ince-in-Makerfield 19·1, Lees 18·7, Skelmersdale 18·0, Royton 17·6, Ashton-under-Lyne (B.) and Kirkham each 17·5, Heywood (B.) 17·2, and Widnes (B.) 17·0.

STANDARDIZED DEATH-RATES.—The Registrar-General’s method of “standardizing” the death-rates of all sanitary districts in England and Wales permits of fair comparison of the rates of districts in which the sex and age constitution differs considerably, and the local Medical Officers of Health have been supplied, through the County Health Department, with the “factor” necessary for the correction of these variations. The nett death-rate multiplied by the “factor” gives the standard death-rate.



The following table illustrates the difference between the “crude” and “standardized” death-rates for the County, and for the urban and rural districts :—

	“Crude” death-rate per 1,000.	“Standard- izing” Factor.	“Standard- ized” death-rate.	Difference. per 1,000.
Total of County ...	13·95	1·0570	14·74	+0·79
Aggregate of Urban Districts..	14·17	1·0692	15·15	+0·98
Aggregate of Rural Districts...	12·53	0·9864	12·35	—0·18

TRANSFERABLE BIRTHS AND DEATHS.—The death-rates of the different sanitary areas are now more accurate than in former years, owing to the scheme in vogue by which the deaths of persons who, having a fixed or usual residence, die in a district other than that in which they resided, are transferred to the district of residence. By this method 3,664 deaths occurring in the County districts in 1914 were outwardly transferred, and 2,953 deaths, known as “inward transfers,” have been allocated by the County Public Health Department to their proper districts. Prior to the adoption of the scheme of transfer, many deaths were excluded from the district in which they occurred, but were not debited to the district of former residence, and consequently increased death-rates are now recorded in certain districts where this correction had not previously taken place. The following examples may be cited of large numbers of deaths which occurred in public institutions in 1914, being excluded from the statistics of the districts in which the institutions are situated, and being assigned to other areas :—Ashton-under-Lyne (B.) 235, Atherton 92, Billinge 190, Eccles (B.) 84, Farnworth 312, Fulwood 218, Lancaster (B.) 441, Ormskirk 98, Prestwich 169, Rawtenstall (B.) 103, Swinton and Pendlebury 179, Wardle 211, Preston (R.) 103, Warrington (R.) 171, Whiston (R.) 357, &c.



Births are also similarly dealt with ; of births occurring in public institutions (mostly workhouses), 204 have been allocated to County districts, and 206 transferred away. There were 127 illegitimates amongst the 204, and 167 amongst the 206.

**Infant Mortality.**—The deaths of children under the age of one year during 1914 numbered 4,338, or 17·78 per cent. of the total deaths at all ages, and the rate of infant mortality, which is expressed as the rate per 1,000 births, corresponded to 112 ; in the urban districts 115, and in the rural districts 96, against a County rate of 124 in the preceding year, and urban and rural rates of 128 and 100 respectively, the reduction being equal to 12 per 1,000 births in the County, 13 in the urban districts, and 4 in the rural districts. With the exception of the year 1912, when the County infant mortality was 104, the rate for the year 1914 was the lowest on record. Comparison with the average of the ten years 1904-1913 shows that the County rate in 1914 was more favourable to the extent of 16 per 1,000 births in the County, 17 in the urban districts, and 4 in the rural districts.

The infant death-rate for the whole of England and Wales for 1914 was 105, or 7 per 1,000 births lower than the County average.

The following table gives the infant death-rates for the Administrative County and those of England and Wales for the years 1904-1914 :—

	Deaths of Children under 1 Year to 1,000 Births.										
	1914.	1913.	1912.	1911.	1910.	1909.	1908.	1907.	1906.	1905.	1904.
Urban Districts.	115	128	106	148	121	119	136	129	143	137	162
Rural Districts..	96	100	89	111	93	87	97	96	109	101	124
Administrative County .....	112	124	104	144	117	115	131	125	139	132	157
England and Wales.....	105	109	95	130	106	109	121	118	133	128	146

In 2 of the County districts the infant death-rate in 1914 exceeded 200 per 1,000 births ; in 5 districts it was between 150 and 200 ; in 64 districts between 100 and 150 ; and 52 districts had a rate of less than 100.

At Orrell a rate of 217 per 1,000 was recorded, 205 at Milnrow, Ashton-under-Lyne (B.) 186, Longridge 174, Skelmersdale 165, Barrowford 157, Lees 151, Chorley (B.) 149, Wardle 148, Church 147, and Ince-in-Makerfield 145. Low rates were reported from Ulverston (R.) 48, Lunesdale (R.) 47, Croston and Heysham each 46, Urmston 42, Bispham-with-Norbreck 40, Adlington 39, and Formby 26.

The yearly infant mortality average of a district is liable to fluctuate greatly, especially in small districts, owing to various causes, such as an epidemic of infectious disease and unfavourable climatic conditions, but the average of a period of ten years gives an index to the real state of things. In the following districts the average for the decade 1904-1913 shows the infant mortality in a very unfavourable light :—Farnworth 187, Ince-in-Makerfield 183, Kirkham 177, Lees 176, Skelmersdale 167, Leigh (B.) 166, and Orrell 165.

The following table shows the infant mortality for 1914 contrasted with the three preceding quinquennia :—

Years.	Infant Mortality.			Per 1,000 of Population.	
	Rate of Deaths under One Year.		Percentage of Infant Deaths to Total Deaths at all ages.	Birth-rate.	Death-rate.
	Per 1,000 Births.	Per 1,000 of the Population			
1899—1903	155	4·17	25·58	26·81	16·31
1904—1908	136	3·43	23·37	24·94	14·66
1909—1913	120	2·73	19·67	22·57	13·91
1914	112	2·48	17·78	22·02	13·95





DIAGRAM SHOWING THE INFANT MORTALITY PER 1000  
BIRTHS IN THE ADMINISTRATIVE COUNTY (RED LINE),  
IN THE URBAN DISTRICTS (INTERMITTENT LINE),  
AND IN THE RURAL DISTRICTS (DOTTED LINE).

1891 - 1914.

Infant  
Mortality  
per 1000  
Births.







TABLE A.

**INFANT MORTALITY.**—Nett Deaths during 1914 from stated Causes at various Ages  
under One Year of Age.

CAUSE OF DEATH.				Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 Weeks	4 Weeks and under 3 Months	3-6 Months	6-9 Months	9-12 Months	Total Deaths under One Year.
ALL CAUSES.	Certified	..	..	912	216	207	181	1516	743	717	657	591	4224
	Uncertified	..	..	50	2	3	2	57	16	25	10	6	114
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	1	..	1	..	..	..	..	1
Measles	..	..	..	..	..	1	1	2	4	8	47	73	134
Scarlet Fever	..	..	..	..	..	..	..	..	..	..	2	2	4
Whooping Cough	..	..	..	..	..	1	4	5	39	38	42	49	173
Diphtheria and Croup	..	..	..	..	..	..	..	..	..	1	2	8	11
Erysipelas	..	..	..	..	..	1	..	1	..	2	..	..	3
Tuberculous Meningitis	..	..	..	..	..	..	..	..	2	11	19	16	48
Abdominal Tuberculosis	..	..	..	..	..	..	..	..	5	10	17	11	43
Other Tuberculous Diseases	..	..	..	..	..	1	1	2	3	12	10	11	38
Meningitis ( <i>not Tuberculous</i> )	..	..	..	..	1	1	2	4	12	26	23	27	92
Convulsions	..	..	..	49	19	20	11	99	48	39	45	20	251
Laryngitis	..	..	..	..	..	1	..	1	1	5	..	1	8
Bronchitis	..	..	..	3	7	14	12	36	84	101	74	80	375
Pneumonia (all forms)	..	..	..	..	4	3	6	13	72	94	126	117	422
Diarrhoea	..	..	..	1	5	4	7	17	50	86	64	44	261
Enteritis	..	..	..	5	5	10	14	34	75	91	55	38	293
Gastritis	..	..	..	..	3	7	2	12	38	20	15	10	95
Syphilis	..	..	..	..	3	..	4	7	17	7	3	1	35
Rickets	..	..	..	..	..	..	..	..	..	2	5	6	13
Suffocation, overlying	..	..	..	8	..	..	1	9	7	5	4	..	25
Injury at Birth	..	..	..	22	2	1	..	25	..	2	..	..	27
Atelectasis	..	..	..	41	3	3	2	49	3	..	..	..	52
Congenital Malformations	..	..	..	89	28	19	12	148	23	10	6	6	193
Premature Birth	..	..	..	517	65	42	37	661	59	13	4	1	738
Atrophy, Debility, and Marasmus	..	..	..	152	53	57	43	305	160	100	41	25	631
Other Causes	..	..	..	75	20	23	24	142	57	59	63	51	372
Totals	..	..	..	962	218	210	183	1573	759	742	667	597	4338

Diagram No. 3 outlines the infant mortality of the County since 1891, distinguishing the urban and rural averages.

Table A analyses the causes of deaths in 1914 of infants under the age of one year at various age periods. Of the total deaths (4,338) 962, or 22·1 per cent. occurred during the first week of life, and in the second, third, and fourth weeks 611 children succumbed, making a total in the first four weeks of 1,573, or 36·2 per cent. of the total infant mortality. Under the age of three months 53·7 per cent. of the infant deaths were registered.

Further reference to Table A will show that the deaths from diarrhœa and enteritis number only 554, whilst in the preceding year 1,035 deaths were ascribed to these diseases. As illustrating the effect of these hot-weather diseases on the infant mortality, it may be observed that in 1912, when the temperature of the summer months was well below the average, the number of deaths was only 350, whilst in 1911 when the temperature was unusually high no less than 1,709 deaths were attributed thereto. Deaths from premature birth, congenital malformations, atrophy, debility, and marasmus, in 1914 totalled 1,562, against 1,595 in the preceding year. Whooping cough contributed 73 more and pneumonia 81 deaths less than in the year 1913. Deaths from the other specified diseases approximated closely with the corresponding totals of last year.

CHILD WASTE IN EARLY LIFE.—In previous reports reference has been made to the grave loss of infant life in this County from diseases coming within the category “preventable,” but attention may again, with advantage, be focussed on several conditions still existing, which are inimical to the preservation of infant lives. These conditions are pointedly summed up in a report of the Local Government Board, issued in 1914, dealing with the infant mortality of Lancashire, viz. :—



(1) “The continuance of unsatisfactory methods of dealing with excremental and domestic refuse.

(2) “Unsatisfactory conditions of housing, including deficient arrangements for storage of food, and imperfectly paved yards and back streets.

(3) “The industrial employment of married women during pregnancy and after confinement.

(4) “A relatively low standard of life, especially in the areas in which miners are employed.”

The Sanitary Authorities in the County in general have during recent years initiated and carried out many local reforms in sanitary administration, and there has been a general improvement in domestic hygiene, yet much remains to be accomplished in the way of removing unwholesome surroundings of dwelling-houses, in the conversion of the abominable privy midden which allows the retention, in some instances within a few feet of the dwelling-houses, of fæcal and decaying vegetable and other refuse for months, the paving of back yards, and greater attention to the scavenging and cleansing of back streets and back passages. The standard of domestic life in certain areas is also to be deplored, as under such circumstances an excessive infant mortality is almost inevitable.

The following extracts on the subject of infant mortality from the reports of District Medical Officers of Health are of interest :—

Heywood (B.). Dr. Hitchon reports : The chief cause of the high infant mortality is improper feeding. Only 25 per cent. of the infants who died during the year were fed naturally. There is little doubt that, if mothers would only undertake this natural duty to their offspring, there would be a very marked diminution in our infant mortality, and a marked increase in the resistive powers against disease of those who survived.



Hurst. “Want of cleanliness,” writes Dr. Hilton, “generally plays a great part in connection with infant mortality, and it should be the duty of the Sanitary Authority to secure improved conditions of housing, &c., by insisting upon the paving of yards and streets, the removal of refuse, &c., not merely as routine work in regard to sanitation, but also from an educational standpoint, as a stimulus to the better disposed among the community to raise their standard of living.”

Nelson (B.). Dr. Millar, in reference to preventable infant mortality, states: taking the deaths from prematurity only, 75 per cent. are amongst the children of employed mothers.

Rawtenstall (B.). Dr. Helm says that children born now have a better chance of surviving than was formerly the case, and this is due to several causes, the most important being the policy pursued by the Corporation of improving the general sanitation of the district by construction of sewers, paving of streets, especially back streets and those with dead ends; abolition of ashpits, &c.; and ensuring a pure water supply to the great majority of the population.

Swinton and Pendlebury. Dr. Stalker writes: Where a declining birth-rate is unaccompanied by a lessening of the infant mortality rate—and no great lessening of the latter rate can be claimed for this district during the last 10 years—there exists an absorbing problem which Local Authorities cannot ignore, and which calls for the most urgent attention of those who have the economic stability of the community as an interest.

Bury (R.). Dr. Cook reports: Fifty per cent. of the infant deaths were due to congenital debility and malformations, including premature birth, this large proportion being due to the baneful influence of pregnant women working to within a few days of their confinement.

NOTIFICATION OF BIRTHS ACTS, 1907 AND 1915.—From information supplied by Medical Officers of Health in their Annual Reports, it appears that the Act of 1907 had, at the end of the year 1914, been adopted in 39 districts, viz., the municipal boroughs (14) of Accrington, Ashton-under-Lyne, Chorley, Clitheroe, Colne, Darwen, Eccles, Haslingden, Lancaster, Leigh, Middleton, Nelson, Rawtenstall, and Widnes, the ten urban districts with a population over 20,000, viz., Ashton-in-Makerfield, Atherton, Chadderton, Farnworth, Hindley, Ince-in-Makerfield, Radcliffe, Stretford, Swinton and Pendlebury, and Waterloo-with-Seaforth, and 15 urban districts with a population less than 20,000, viz., Abram, Brierfield, Crompton, Failsworth, Golborne, Haydock, Littleborough, Milnrow, Newton-in-Makerfield, Oswaldtwistle, Prestwich, Tyldesley-with-Shakerley, Wardle, Westhoughton, and Whitworth. These 39 districts have a population of 945,193, and 21,535 births occurred therein during the year 1914, leaving a population of 803,096, with 16,972 births in districts in which the Act had not been adopted. Subsequent to the end of the year the urban districts of Horwich, Hurst, Lees, and Upholland adopted the 1907 Act.

By the Notification of Births (Extension) Act, 1915, passed 29th July, 1915, and operative from 1st September, 1915, the notification of births is made universal throughout the country. The Act also provides that for the purpose of following up the information obtained, and for facilitating arrangements for the care of expectant mothers, nursing mothers and young children, all the powers of the Public Health Acts may be exercised. These powers are available, not only to all Sanitary Authorities, but also to County Councils.

HEALTH VISITORS.—Whole-time health visitors have been appointed in 12 of the 14 boroughs above-mentioned, and part-time visitors in Darwen (B.) and Rawtenstall (B.).



Of the larger urban districts in which the 1907 Act is in force, 8 have appointed whole-time visitors, and 2—Chadderton and Waterloo-with-Seaforth—part-time visitors. Four of the smaller urban districts in which the Act is operative have also whole-time visitors, viz., Crompton, Failsworth, Newton-in-Makerfield, and Tyldesley-with-Shakerley; 9 have part-time nurses engaged; and in two districts, Oswaldtwistle and Prestwich, so far no appointments have been made. At Orrell, where the Notification of Births Act has not been adopted, but a voluntary system is in operation, a part-time health visitor is employed.

MATERNITY AND CHILD WELFARE.—In several County districts, as shewn below, infant welfare centres have been established at which expectant mothers, and mothers with infants and little children, may attend for instruction and advice. These “centres” have various designations, including “School for Mothers,” “Mothers’ Welcome and Infants’ Aid Society,” “Mothers’ Club,” “Infant Consultation Centres,” &c. In certain instances the “Centres” are worked entirely from the health department by the health visitors, under the guidance of the Medical Officer of Health, whilst others are voluntary associations worked in close co-operation with the Health Authority, the Medical Officer of Health being frequently present, and the health visitors regularly render assistance. Districts in which such “Centres” have been established are Ashton-under-Lyne (B.), Atherton, Brierfield, Darwen (B.), Droylsden (opened in 1915), Eccles (B.), Farnworth, Lancaster (B.), Leigh (B.), Orrell, Padiham, Swinton and Pendlebury, Tyldesley-with-Shakerley, Withnell. At Chorley (B.) the establishment of a baby clinic has been decided upon, and similar provision at Nelson (B.) is under consideration.

From the comments made by Medical Officers of Health in their reports, it is satisfactory to note that the efforts made

in this direction by Local Authorities and voluntary agencies have undoubtedly helped to secure improved conditions as regards the care of young children, and have played an important part in the campaign for the reduction of infant mortality.

The Local Government Board, in July, 1914, prepared a memorandum with a view to assisting the formulation of child welfare schemes or extending the work already undertaken. The work of home visitation is one to which the Board attach the greatest importance, whilst a complete scheme would comprise the following elements, each of which should be organised in its direct bearing on infantile health :—

Arrangements for—

*Ante-Natal.*

- (1) An Ante-natal Clinic for expectant mothers.
- (2) The home visiting of expectant mothers.
- (3) A Maternity Hospital or beds at a hospital, in which complicated cases of pregnancy can receive treatment.

*Natal.*

- (1) Such assistance as may be needed to ensure the mother having skilled and prompt attendance during confinement at home.
- (2) The confinement of sick women, including women having contracted pelvis or suffering from any other condition involving danger to the mother or infant, at a hospital.

*Post-Natal.*

- (1) The treatment in a hospital of complications arising after parturition, whether in the mother or in the infant.
- (2) The provision of systematic advice and treatment for infants at a Baby Clinic or Infant Dispensary.



- (3) The continuance of these Clinics and Dispensaries, so as to be available for children up to the age when they are entered on a school register, *i.e.*, the register of a Public Elementary School, Nursery School, Crèche, Day Nursery, School for Mothers or other school.
- (4) The systematic home visitation of infants and of children not on a school register as above defined.

The Board, in a later memorandum, state that it will generally be desirable to formulate comprehensive schemes for counties and county boroughs, although in some cases portions of the services may be undertaken by the larger District Councils with advantage. In all cases, however, in which a general scheme is organised for the County, the work should be carried on in close co-operation with the Sanitary Authority. In the development of general schemes, the services of hospitals and other efficient voluntary agencies should be fully utilised. The Government have agreed to provide by means of annual grants, one-half the cost of the whole or any part of schemes for maternity and child welfare approved by the Board.

**The Principal Epidemic Diseases.**—The diseases usually classified under this head, *viz.*, small-pox, measles, scarlet fever, diphtheria (including membranous croup), whooping cough, fever (comprising enteric, typhus, and continued fever), and diarrhœa with enteritis, were responsible for 2,202 deaths (urban districts 2,014, rural districts 188), corresponding to 9·02 per cent. of the total deaths at all ages. In 1913 these diseases contributed 2,754 deaths, equal to 11·07 per cent. of all deaths; in 1912 the deaths numbered 1,963 (8·2 per cent.), and 3,893 in 1911 (14·9 per cent.). As compared with the preceding year, there was a fall in the deaths from diarrhœa and enteritis of 647, 57 less from enteric fever and 46 from measles, but whooping cough caused 103 more deaths than in 1913, scarlet fever 73, and diphtheria 22.

The death-rate for the year 1914 for the group of diseases included under this heading was 1·25 per 1,000 of the estimated population—urban districts 1·33, rural districts 0·79—against a rate of 1·57 last year (urban districts 1·64, rural districts 1·13), 1·12 in 1912, and 2·25 in 1911. The average of the ten years, 1904-1913, was 1·46, the rate for the year under review being, therefore, more favourable to the extent of 0·21 per 1,000. The rate for England and Wales corresponded to 1·21 per 1,000, but this average does not include any deaths from diarrhoea and enteritis amongst persons over two years of age, whilst the County rate is inclusive of these deaths at all ages.

The Table below gives the epidemic death-rates for the Administrative County during 1914, compared with the 10 years 1904-1913 :—

YEAR.	Annual Death-rate per 1,000 of the population.							
	Principal Epidemic Diseases	Small-pox.	Measles.	Scarlet Fever.	Diphtheria and Croup.	Whooping Cough.	* Enteric Fever.	Diarrhoea and Enteritis.
1904	1·93	0·0116	0·43	0·18	0·15	0·35	0·12	0·66
1905	1·37	0·0033	0·26	0·13	0·15	0·15	0·14	0·52
1906	1·71	nil.	0·36	0·11	0·16	0·13	0·14	0·79
1907	1·27	0·0005	0·37	0·09	0·15	0·28	0·09	0·26
1908	1·37	0·0005	0·18	0·10	0·16	0·24	0·12	0·54
1909	1·06	nil.	0·35	0·12	0·15	0·14	0·10	0·18
1910	1·00	nil.	0·15	0·10	0·11	0·23	0·10	0·29
1911	2·25	nil.	0·29	0·08	0·14	0·15	0·12	†1·43
1912	1·12	nil.	0·30	0·05	0·12	0·24	0·08	†0·30
1913	1·57	nil.	0·31	0·05	0·11	0·13	0·10	†0·85
Average 10 years.	1·46	0·0015	0·30	0·10	0·14	0·20	0·11	0·58
1914	1·25	nil.	0·28	0·09	0·13	0·18	0·07	†0·48

\* Prior to 1911 the "Fever" death-rate included deaths from typhus and continued fevers (if any). † Enteritis deaths included since 1911.

Tables I. and III. appended, pages 224 *et seq.*, show the epidemic death-rate of each district, and Tables II. and IV. give the number of deaths from each of the epidemic diseases, distinguishing those of children under the age of five years.

The following table gives the County and urban and rural death-rates from each of the principal epidemic diseases in 1914, compared with the corresponding rate for the whole of England and Wales :—

	Annual Death-rate per 1,000 of the population.							
	Principal Epidemic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria and Croup.	Whooping Cough.	Enteric Fever.	Diarrhœa and Enteritis.
Urban Districts.....	1·33	nil.	0·31	0·10	0·12	0·20	0·07	0·51
Rural Districts .....	0·79	nil.	0·13	0·05	0·14	0·11	0·05	0·28
Administrative County of Lancaster .....	1·25	nil.	0·28	0·09	0·13	0·18	0·07	0·48
England and Wales.....	* 1·21	0·00	0·24	0·08	0·15	0·21	0·05	* 0·48

\* Includes deaths from diarrhœa and enteritis under two years of age only.

The epidemic death-rate in 25 districts was under 0·5 per 1,000 of the population, between 0·5 and 1·0 in 39 districts, between 1·0 and 2·0 in 46 districts, between 2·0 and 3·0 in 10 districts, and over 3·0 in 3 districts. The highest rates were recorded in Ince-in-Makerfield 4·11, Ashton-under-Lyne (B.) 3·40, Orrell 3·26, Barrowford 2·75, Widnes (B.) 2·70, and Limehurst (R.) 2·56.

**Small-pox.**—Fourteen cases of this disease were notified in 1914, viz., 2 in Bacup (B.) in March, 11 in Milnrow between



May and July, and 1 in Colne (B.) in July. There were no fatalities. The whole of the cases were promptly removed to hospital. The source of infection in the outbreaks at Bacup (B.) and Colne (B.) was not traced, but in the Milnrow cases the infection was believed to have been obtained during the manipulation of imported raw cotton. The latter outbreak was confined to the employees at one cotton mill. Three other cases were notified, but after removal to hospital proved not to be small-pox. About 130 operatives who had been in contact with the persons affected were kept under close observation, the mill was closed for two weeks and thoroughly disinfected, and a considerable quantity of suspected cotton waste was destroyed. During the period of the outbreak about 500 persons submitted themselves for vaccination or re-vaccination.

The incidence of small-pox since 1890 is given below :—

Year.	Cases.	Deaths.	Year.	Cases.	Deaths.
1890.....	1 .....	0	1903.....	1156 .....	68
1891.....	2 .....	0	1904.....	422 .....	22
1892.....	612 .....	70	1905.....	255 .....	6
1893.....	1038 .....	84	1906.....	233 .....	0
1894.....	259 .....	25	1907.....	13 .....	1
1895.....	100 .....	19	1908.....	2 .....	1
1896.....	83 .....	10	1909.....	7 .....	0
1897.....	3 .....	0	1910.....	23 .....	0
1898.....	6 .....	1	1911.....	21 .....	0
1899.....	16 .....	1	1912.....	1 .....	0
1900.....	59 .....	3	1913.....	10 .....	0
1901.....	6 .....	0	1914.....	14 .....	0
1902.....	436 .....	22			

The number of unvaccinated persons in this country is rapidly increasing, as will be seen from the following table, which is extracted from the last issued report of the Medical Officer to the Local Government Board :—



	Per cent. of Births in each instance.								
	1893-1897.	*1898.	1899-1906.	1907.	1908.	1909.	1910.	1911.	1912.
Abstention— ("Exempted," "postponed," and "remain- ing").....	21·0	26·6	16·7	20·4	27·9	32·3	36·3	38·9	42·9
(Exemptions alone).....	—	5·1	4·3	8·4	17·0	21·6	26·0	28·5	32·1
Acceptance— (Vaccinated) ..	67·7	61·0	72·7	70·9	63·2	59·8	55·9	52·3	50·1

\* The Vaccination Act, 1898, was only in operation for a portion of the year.

**Measles.**—During 1914 a total of 506 deaths occurred from measles, or 46 less than in the previous year. In 1912 there were 541 fatalities, and 518 in 1911.

The County death-rate from this disease was 0·28 per 1,000—urban districts 0·31, rural districts 0·13—as compared with a rate of 0·31 last year, 0·30 in 1912, and 0·29 in 1911. The rate for England and Wales in 1914 was 0·24, and the County average for the ten years 1904-1913 was 0·30.

The ages at death were as follow :—

Under one year ... .. 134 or 26·5 per cent.

Between one and five years 346 ,, 68·4 ,,

Five years and upwards ... 26 ,, 5·1 ,,

In 43 districts no death from measles was registered, as compared with 46 districts in 1913. High death-rates from measles were attained in Ince-in-Makerfield 2·19, Barrowford 2·06, Chorley (B.) 1·17, Padiham 1·06, Milnrow 1·02, and Norden 1·0.

School closure on account of the prevalence of this disease was adopted in 37 districts; in 1913 this action was taken in 45 districts, and in 50 in 1912.

The monthly returns respecting 485 of the deaths from measles show that the fatalities were most numerous in the second quarter, and fewest in the first quarter :—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
January ... 5	April ..... 53	July..... 39	October ... 54
February... 14	May ..... 58	August ... 39	November . 42
March..... 22	June ..... 81	September. 28	December . 50
41	192	106	146

As in previous years, many Medical Officers of Health refer to the gross carelessness often exhibited by parents in allowing healthy children to associate with one who has become infected, with the idea that all children *must* have measles at some time or other, and consequently they may as well “get it over together.” At Ormskirk, for such a foolish practice, legal proceedings were instituted and a fine inflicted.

The Local Government Board in a circular letter, dated 31st March, 1915, intimated to Sanitary Authorities that they were prepared to make measles, German measles, and whooping cough compulsorily notifiable on application from the Sanitary Authority, providing that when a notification is received the Medical Officer of Health, or an Officer of the Authority acting under his instructions, shall make such inquiries and take such steps as are necessary or desirable for investigating the nature of the case and the source of infection, for preventing the spread of infection, and for removing conditions favourable to infection. Sanitary Authorities were asked to take this question into consideration, and to inform the Board if they were desirous of obtaining the

powers indicated. The value of compulsory notification of measles is a question upon which much difference of opinion exists ; it is urged that as measles is infectious before it can be diagnosed, therefore the infection is spread before notification could take place, and in many cases of a mild character medical advice is not sought. On the other hand, it should be borne in mind that measles in itself is not often fatal, the danger being in the complications which arise owing to want of care in nursing and treatment. Notification, although perhaps not preventing the spread of the disease, would enable early supervision to be exercised by the Sanitary Authority, and by impressing upon mothers the importance of careful nursing many lives might be saved, and in other cases permanent ill-health avoided.

**Scarlet Fever.** — This disease, both in incidence and fatality, was much worse than last year, viz., 8,275 cases notified and 169 deaths, against 4,778 cases and 96 deaths. The number of notifications was higher than in any year since 1909. The case mortality was the same as in 1913 and 1912, viz., 2·0 per cent. ; the average case mortality for the last ten years was 2·7 per cent.

The scarlet fever death-rate corresponded to 0·09 per 1,000 of the population, 0·10 in the urban districts, and 0·05 in the rural districts. Last year and in 1912 the County rate was 0·05, 0·08 in 1911, and 0·10 in 1910. The rate for England and Wales in 1914 was 0·08, and the County average for the decade 1904-1913 was 0·10.

The ages at death were as follow :—

Under one year	...	...	4 or 2·3 per cent.
Between one and five years	85	„	50·3 „
Five years and upwards	...	80	„ 47·3 „



The table below gives the monthly incidence of the disease in the districts supplying returns :—

1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.		
	Cases.	Deaths.		Cases.	Deaths.		Cases.	Deaths.		Cases.	Deaths.
Jan.	575	5	April	591	14	July	593	8	Oct.	939	7
Feb.	611	14	May	664	9	Aug.	561	10	Nov.	927	15
Mar.	714	10	June	587	6	Sept.	597	9	Dec.	826	7
	1900	29		1842	29		1751	27		2692	29

The following districts suffered severely from this disease :—

	Cases.	Deaths.	Removals to hospital.
Ashton-under-Lyne (B.) ...	357	14	107
Chadderton ...	203	2	97
Darwen (B.) ...	206	1	89
Eccles (B.) ...	249	1	63
Heywood (B.) ...	239	3	60
Lancaster (B.) ...	237	1	203
Leigh (B.) ...	441	4	257
Middleton (B.) ...	214	5	132
Stretford ...	333	5	190

Of the 8,275 cases notified, 3,635, or 43·9 per cent. were isolated in hospital, against a percentage of removals of 44·6 last year and 49·7 in 1912. In the following districts all the scarlet fever cases received hospital treatment :—Adlington, Bispham-with-Norbreck, Heysham, Skelmersdale, Thornton, and Ulverston; in Morecambe (B.) 96 per cent. were removed, 95 per cent. in Chorley (B.), Abram 94 per cent., Walton-le-Dale 93, Preston (R.) 91, and Brierfield, Farnworth, and Ormskirk each 89 per cent. By contrast, few removals took place in :—Bacup (B.) 193 cases 12 removals,



Rawtenstall (B.) 172 cases 10 removals, Limehurst (R.) 135 cases 13 removals, and in the following districts no cases were isolated in hospital:—Accrington (B.) 95 cases notified, Great Harwood 82, Hurst 79, Mossley (B.) 108, and Norden 79.

With a view to curtailing the spread of the disease, schools were closed in 22 districts.

The type of the disease, on the whole, continued mild, and this characteristic is one of the greatest difficulties encountered in the attempts to prevent its spread. This point is particularly emphasised in many reports, whilst on the other hand the Medical Officer of Health, Huyton-with-Roby, reports that the disease showed itself in a much more virulent and malignant form than he had experienced for over twenty years,

Personal infection, indiscriminate visiting, and thoughtless exposure of infected children were again responsible for many outbreaks, and in this connection, Dr. Trimble, Preston (R.), expresses the opinion that the time has arrived when the Sanitary Authority should cease to be satisfied with a verbal caution, and he is convinced that prosecution of a few offenders would have a much more salutary effect. Leniency has not proved satisfactory in prohibiting recurrences of gross carelessness, and stronger measures must be taken. At Chadderton a young man was summoned before the Magistrates for wilful exposure in the street whilst suffering from scarlet fever, and a fine of 20s. and costs was imposed.

**Whooping Cough.**—An increase in the number of deaths from whooping cough is recorded, 332 fatalities taking place as compared with 229 in the preceding year.

The County death-rate 0·18 per 1,000 (urban districts 0·20, rural districts 0·11) was 0·3 below the rate for the whole

of England and Wales. In 1913 the County rate was 0·13, and the average of the ten years 1904-1913 was 0·20.

The quarterly returns show that the disease was most prevalent in the second quarter and least in the fourth quarter. In 48 districts no death from whooping cough was recorded. School closure was necessitated in 9 districts.

The ages at death were :—

Under 1 year	...	...	...	173	or	52·1	per cent.
Between 1 year and 5 years	...	147	„	44·2	„		
Five years and upwards	...	12	„	3·6	„		

Accepting fatal cases as the basis for comparison, the disease appears to have been prevalent in Ashton-under-Lyne (B.) 32 deaths, Middleton (B.) 15 deaths, Widnes (B.) 15 deaths, Atherton 14 deaths, Dalton-in-Furness 14 deaths, and Swinton and Pendlebury 12 deaths.

**Diphtheria and Croup.** — Diphtheria was appreciably more prevalent in 1914 than in the preceding twelve months. The cases notified numbered 1,732, and the deaths 230, against 1,482 cases and 208 deaths. In 1912 there were 1,418 cases 220 deaths, and 1,532 cases 254 deaths in 1911. The percentage of deaths to cases in 1914 was 13·2, as compared with 14·0 in 1913, and 15·5 in 1912.

The County death-rate was equal to 0·13 per 1,000—0·12 in urban districts, 0·14 in rural districts. Last year the County rate was 0·11 and 0·12 in 1912. The rate for England and Wales in 1914 was 0·15.

Below are given the ages at death :—

Under 1 year	...	...	...	11	or	4·8	per cent.
Between 1 year and 5 years	...	114	„	49·5	„		
Five years and upwards	...	105	„	45·6	„		

The following table gives the monthly incidence of the disease in the districts supplying returns :—

1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.		
	Cases.	Deaths.		Cases.	Deaths.		Cases.	Deaths.		Cases.	Deaths.
Jan.	186	23	April	125	10	July	134	17	Oct.	158	13
Feb.	173	26	May	119	10	Aug.	114	14	Nov.	156	21
Mar.	185	19	June	93	16	Sept.	109	16	Dec.	170	15
	544	68		337	36		357	47		484	49

The incidence of the disease was most marked in :—

	Cases.	Deaths.	Removals to hospital.
Atherton ... ..	61	3	18
Eccles (B.) ... ..	64	7	37
Lancaster (B.) ... ..	56	3	12
Leigh (B.) ... ..	67	11	31
Lytham ... ..	46	11	42
St. Annes-on-the-Sea ... ..	53	—	30
West Lancashire (R.) ... ..	88	7	71
Whiston (R.) ... ..	52	8	41

Forty districts escaped fatality from this disease, against 48 in 1913. In 5 districts schools were closed. Arrangements for the supply of anti-toxin have been made by the majority of Authorities. From 64 districts 1,660 swabs were submitted for bacteriological examination.

**Enteric Fever.**—It is satisfactory to record a decline in the number of enteric fever notifications, viz., 650 against 875 last year. With the exception of the year 1912, when 620 cases were reported, the notifications are the lowest recorded for the County. The deaths in 1914 were 123, or 57 fewer than in the preceding year.



The enteric fever death-rate in 1914—0·07 per 1,000 of the population (urban districts 0·07, rural districts 0·05)—was below any previously recorded. In 1913 the rate was 0·10, 0·08 in 1912, and 0·12 in 1911. The average of the ten years 1904-1913 corresponded to 0·11 per 1,000. England and Wales had a rate in 1914 of 0·05 per 1,000.

The case mortality in the County equalled 18·9 per cent., against 20·5 per cent. in 1913, and 23·7 per cent. in 1912.

Cases were most numerous in Middleton (B.) 43 (9 deaths), Colne (B.) 33 (3 deaths), Lancaster (B.) 28 (2 deaths), Tyldesley-with-Shakerley 21 (3 deaths), Ashton-in-Makerfield 20 (4 deaths), and Upholland 20 (no deaths).

In 63 districts there were no deaths from enteric fever, and in 25 districts the disease was entirely absent.

The table below gives the monthly incidence of the disease in the districts supplying monthly returns :—

1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.		
	Cases.	Deaths.		Cases.	Deaths.		Cases.	Deaths.		Cases.	Deaths
Jan.	54	8	April	43	6	July	64	3	Oct.	51	6
Feb.	56	4	May	45	8	Aug.	50	8	Nov.	60	6
Mar.	64	14	June	36	9	Sept.	74	9	Dec.	61	11
	174	26		124	23		188	20		172	23

From 62 districts 399 specimens of blood were submitted for bacteriological examination.

The following tabular statement is of interest as showing the marked decline in the number of cases of enteric fever in the Administrative County during the 15 years which have elapsed since notification became compulsory throughout the



country, and bears testimony to sanitary progress in most parts of the County, particularly as regards the abolition of the privy midden, and also to the improved water supplies now available :—

	Cases.	Deaths.		Cases.	Deaths.
1900	... 2183	... 399	1908	... 1219	... 225
1901	... 2094	... 364	1909	... 994	... 192
1902	... 1747	... 297	1910	... 1016	... 193
1903	... 1479	... 277	1911	... 1091	... 220
1904	... 1235	... 233	1912	... 620	... 147
1905	... 1335	... 255	1913	... 875	... 180
1906	... 1248	... 252	<b>1914</b>	<b>... 650</b>	<b>... 123</b>
1907	... 859	... 164			

The following extracts are taken from district reports :—

Widnes (B.).—No cases of enteric fever were notified during the year. This is the first year in the history of the Borough during which not a single case of enteric fever has occurred. The town has suffered severely in the past from this disease, and the treatment of cases has been expensive. As soon as the water-carriage system was introduced into the Borough, the notification rate for enteric fever commenced to decrease and, with a few exceptions, it has steadily continued to decline until there is now a complete absence of the disease.

Colne (B.).—Towards the end of February an outbreak of enteric fever occurred, chiefly confined to the Cottontree district. On inquiry, the suspicion was formed that the disease was water-borne. All the persons affected lived in houses, or worked at a tannery and factory supplied with water from a well, situate in the adjoining district of Trawden. Fifty-five houses which relied on this well water were subsequently connected to the town's mains.

Trawden.—The well water above referred to was also considered responsible for an outbreak of enteric fever in this district ; the use of the water was discontinued.

Middleton (B.).—An outbreak of enteric fever, 27 cases, occurred in July. No definite conclusion was arrived at as to the origin and source of the infection, beyond the strong suspicion that it was carried to the various houses affected by a hawker of vegetables and fish, who was undoubtedly suffering from the early stages of this disease.

Ramsbottom.—Two enteric fever cases seemed in their origin to be connected with the consumption of, in one case uncooked mussels, and in the other improperly cooked mussels.

**Diarrhœa and Enteritis.** — There was a marked decrease in the number of deaths from diseases classified under this heading, viz., 842, as compared with 1,489 deaths in 1913. In the urban districts 775 fatalities occurred, and 67 in the rural districts. The diagram on page xlvi. shows that the meteorological conditions of the summer season (July, August, and September) were not conducive to the prevalence of diarrhœa, which is usually rife in hot, dry, seasons. The temperature was only fractionally above the average, whilst the rainfall was 12·8 per cent. above the mean of the summer quarters of the last twenty-one years ; the fall in the diarrhœa mortality represented 51·4 per cent. on the mean of the summer months of the years 1894-1914.

The County diarrhœa death-rate in 1914 corresponded to 0·48 per 1,000 of the population—0·51 in urban districts and 0·28 in rural districts. In 1913 the County rate was 0·85 per 1,000, and the average of the ten years 1904-1913 was 0·58. The rate for England and Wales in 1914 was exactly the same as the County rate (0·48), but the Registrar-General includes only deaths amongst children under the age of two years, whilst the County rate includes deaths at all ages.

Of the 842 deaths, 554 or 65·7 per cent. were amongst children under the age of one year, 155 or 18·4 per cent. between the ages of one and five years, and 133 or 15·7 per

cent. 5 years of age and upwards. Of the 554 infant deaths, 293 were classified under the head of “ enteritis.” Table A, page xxv., shows the deaths of infants at various age periods.

The death-rates for the County, distinguishing the rates for the urban and rural districts, during the years 1904-1914, from diseases classed under the head of “ diarrhœa ” in the Local Government Board Statistical Tables, are given in the following table ; the rate for England and Wales is also shown, but the figures for the whole country for the last three years include only those deaths occurring amongst children under two years of age, whilst in the County averages, deaths at all ages are included :—

	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904
Urban Districts .....	0·51	0·91	0·31	1·51	0·32	0·20	0·59	0·27	0·83	0·54	0·69
Rural Districts .....	0·28	0·44	0·22	0·93	0·15	0·09	0·22	0·16	0·50	0·34	0·41
Administrative County	0·48	0·85	0·30	1·43	0·29	0·18	0·54	0·26	0·79	0·52	0·66
England and Wales ..	0·48	0·55	0·20	1·06	0·29	0·28	0·50	0·29	0·87	0·59	0·86

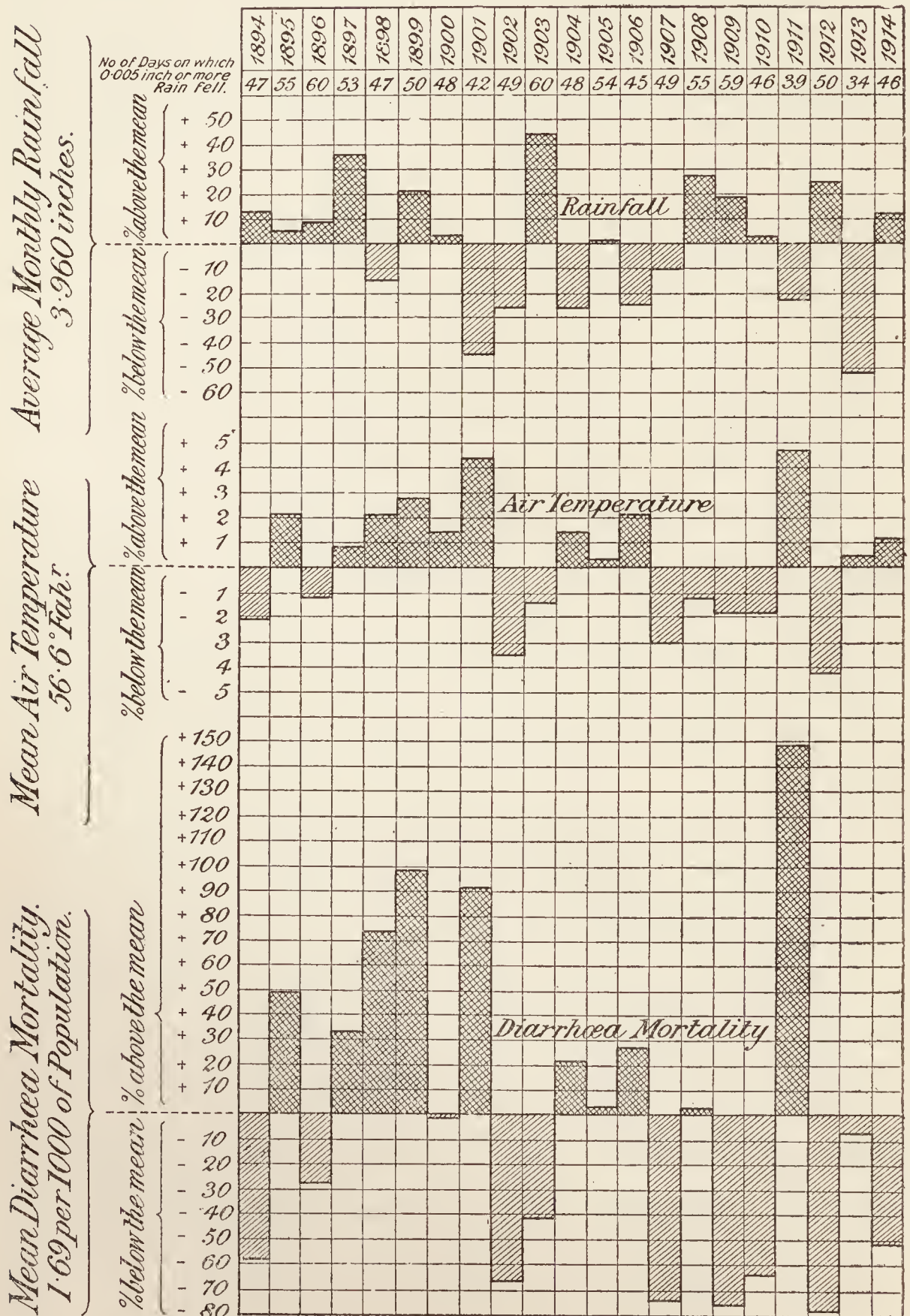
The highest diarrhœa death-rates were recorded in Orrell 1·86, Haydock 1·49, Widnes (B.) 1·41, Ashton-under-Lyne (B.) 1·39, Ince-in-Makerfield 1·29, Litherland 1·12, and Hindley 1·01.

The monthly incidence of “ diarrhœa ” in 1914, as shown by the deaths occurring in districts making returns, is given in the following table :—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
January ... 22	April ..... 16	July..... 66	October ... 83
February... 22	May..... 10	August ... 91	November.. 36
March ..... 27	June ..... 24	September.202	December.. 16
71	50	359	135



Diagram below shows the diarrhœa mortality during the summer months (July, August, September) of the year 1914 and the years 1894-1913, together with the mean air temperature, average rainfall, and number of wet days in the third quarter of each year :—



The statistics regarding temperature and rainfall are taken from the Meteorological Report by the Rev. W. Sidgreaves, S.J., F.R.A.S., of Stonyhurst College Observatory, and further details are by kind permission introduced on pages 249, *et seq.* The adopted mean temperature of the *whole* year 1914 was 48·4°F., and the total fall of rain 50·177 inches, against an average temperature of 48·3°F. and a rainfall of 41·945 inches last year, whilst the mean for the last 67 years was : temperature 46·9°F., rainfall 47·064 inches.

The Medical Officer of the Local Government Board in his last issued report states “ the prevention of diarrhœa is in part concerned with the improvement of sanitary environment within and around the home, in part with the cleanliness of food in respect of its storage, preparation, and suitability for the infant.” In this connection the following extracts from district reports are of interest :—

Hindley.—Handbills were distributed, containing full instructions as to precautions necessary, but Dr. Chronnell is afraid these are of little use. If read at all, in some cases there is no intention of profiting by the suggestions. Food is not often covered, particularly is this the case where milk is kept. The paving of back yards, passages, and open yards is very important, and the privy midden must go before diarrhœal diseases cease. Not until the back streets and yards are paved, and the conservancy system of sewage disposal, &c., is replaced by water-carriage, can this scourge be got rid of.

Rawtenstall (B.).—The low diarrhœal death-rate is no doubt due, in large measure, to the policy which has been followed of improving the general sanitation of the district, by paving and draining of all streets and thus promoting cleanliness, and by the abolition of ash-pits and pail closets, thus removing breeding places for flies.



Waterloo-with-Seaforth. — In connection with the spread of disease, Dr. German calls attention to two most important factors, viz., the extermination of flies and the prevention of dust nuisance. If, in regard to the former, the public generally would take part, and also daily burn the animal and vegetable refuse of their households, they would be rendering a service of incalculable benefit to themselves and the country.

**Acute Poliomyelitis and Cerebro-Spinal Fever.**—According to information extracted from district health reports 17 cases of acute poliomyelitis were notified and 4 deaths resulted, and 7 cases of cerebro-spinal fever were notified and 7 deaths registered, but three of the fatal cases were not reported under the Notification Act. In the year 1913 the former disease gave rise to 38 cases 3 deaths, and the latter 10 cases 5 deaths.

In February, 1915, the Local Government Board issued a memorandum on cerebro-spinal fever, and reference is made to the necessity of hospital isolation of the patient. Throat secretions should be received in pieces of linen and at once destroyed by burning. As swabs taken from the nasopharynx frequently show the presence of highly infective organisms, these should be taken from time to time, and the possibility of "carriers" as agents of infection should be borne in mind. Contacts should also be regarded as possible carriers of infection, although the disease is not highly contagious, and the duration of infectivity is doubtful. The memorandum advises that special attention should be directed to cases of sore throat, headache, pains in the back and limbs, &c., suggesting influenza. Pneumonia may also be present in these outbreaks, and arthritis is not an uncommon complication.

**Influenza.** — The deaths registered numbered 215, against 191 in 1913, an increase of 24. In 1912 the fatalities



numbered 199, and 142 in 1911. Deaths were most numerous in Stretford 10, Westhoughton 9, Accrington (B.) and Widnes (B.) each 8, Darwen (B.), Leigh (B.), and Chorley (B.) each 6. The first quarter again produced the highest mortality, closely followed by the second quarter.

**Bronchitis and Pneumonia** together accounted for 4,395 deaths—bronchitis 2,341, pneumonia 2,054—corresponding to 18·0 per cent. of the total deaths from all causes. Last year these diseases contributed 4,429 deaths, and 4,479 in 1912.

Below are given the death-rates per 1,000 of the population from these diseases for 1914, compared with the preceding five years :—

	1914.	1913.	1912.	1911.	*1910.	1909.
Urban Districts ...	2·59	2·51	2·64	2·39	2·17	2·81
Rural Districts ...	1·99	2·10	2·04	1·87	1·73	2·15
Administrative County.....	2·51	2·53	2·56	2·32	2·12	2·73

\* Prior to 1911 the death-rates included fatalities from pleurisy.

The highest death-rates from bronchitis and pneumonia combined were recorded in Billinge 4·74, Ince-in-Makerfield 4·61, Hurst 4·43, Milnrow 4·33, Hindley 4·14, Orrell 3·89, Limehurst (R.) 3·84, Ormskirk 3·83, and Widnes (B.) 3·80.

**Organic Heart Disease** was accredited with 2,238 deaths, or a rate of 1·28 per 1,000 of the population, against 2,187 deaths, and a rate of 1·24 last year.

**Phthisis (Pulmonary Tuberculosis).** — The deaths assigned to pulmonary tuberculosis numbered 1,523, against 1,441 in 1913—an increase of 82. The percentage of phthisis deaths in 1914 to deaths from all causes was 6·2, as compared with 5·7 per cent. last year.

The County phthisis death-rate corresponded to 0·87 per 1,000 of the population—urban districts 0·89, rural districts 0·69. In 1913 the County rate was 0·82, 0·85 in 1912, and 0·88 in 1911. The average for the ten years 1904-1913 was 0·86. The rate for England and Wales in 1913—the latest year for which statistics are available—was 1·0, or 7·3 per cent. of the death-rate from all causes.

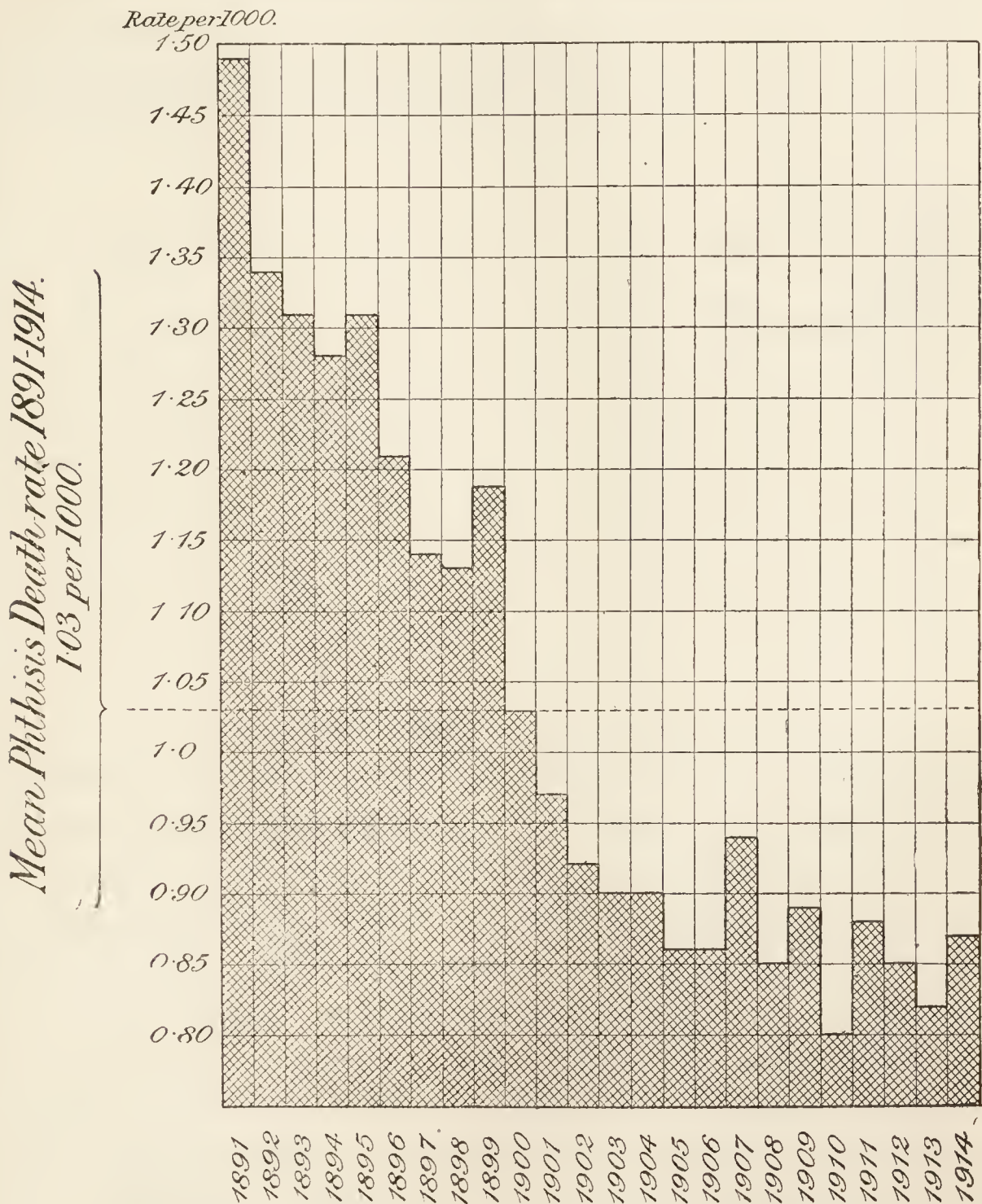
The following table gives the phthisis death-rates for 1914, compared with the previous five years :—

	1914.	1913.	1912.	1911.	1910.	1909.
Urban Districts ...	0·89	0·84	0·88	0·91	0·82	0·90
Rural Districts ...	0·69	0·71	0·67	0·66	0·66	0·79
Administrative County.....	0·87	0·82	0·85	0·88	0·80	0·89

The highest phthisis mortality rates in 1914 were recorded in Kirkham 2·02, Litherland 1·56, Widnes (B.) 1·50, Hurst 1·47, Ormskirk 1·45, Lancaster (B.) 1·39, Prescott 1·37, Heywood (B.) 1·36, Swinton and Pendlebury 1·34, and Atherton 1·31.

Covering a period of 10 years (1904-1913) the following districts had the highest phthisis mortality averages: Longridge 1·45, Ormskirk 1·37, Heywood (B.) 1·35, Ashton-under-Lyne (B.) 1·32, Kirkham 1·30, Chadderton 1·27, Whitworth 1·24, Middleton (B.) 1·22, and Dalton-in-Furness 1·20.

The Diagram below shows the County phthisis death-rate for the year under report, contrasted with the preceding 23 years and with the mean of the whole period :—



OTHER TUBERCULOUS DISEASES.—Tuberculous meningitis was responsible for 206 deaths, and diseases classified as “other tuberculous diseases” 366 deaths, making with the 1,523 deaths due to pulmonary tuberculosis, a total of 2,095, as compared with 1,968 last year and 2,100 in 1912. The combined tuberculosis death-rate in 1914 was 1.19, or 0.07 above the rate for the preceding year.



The following table shows the deaths in 1914 from tuberculous diseases at various age periods, and also the corresponding figures for the years 1913 and 1912 :—

Cause of Death.	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards
Phthisis (Pulmonary Tuberculosis) .....	1523	8	17	19	74	306	656	393	50
Tuberculous Meningitis ....	206	47	29	42	55	16	14	3	..
Other Tuberculous Diseases..	366	74	49	41	61	55	43	35	8
Total 1914..	2095	129	95	102	190	377	713	431	58
Year 1913 ..	1968	102	96	90	190	376	657	388	69
Year 1912 ..	2100	101	92	127	169	409	715	387	100

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.—From weekly returns supplied by Medical Officers of Health, the Tables B and C appended have been compiled. During the fifty-two weeks ended 2nd January, 1915, the number of cases of tuberculosis notified was 3,960, pulmonary tuberculosis 2,820, other forms of tuberculosis 1,140. These totals are exclusive of 170 duplicate notifications, and also exclude 519 notifications respecting cases admitted to sanatoria or hospitals, and 419 notifications of discharges from public institutions. During the forty-eight weeks ended 2nd January, 1914 (the period in the preceding year covered by complete notification), the cases of pulmonary tuberculosis (excluding duplicates) numbered 2,700, and other forms of tuberculosis 1,592.

A card index of all notifications is kept in the County Public Health Department, and copies of the notifications are forwarded weekly to the County Tuberculosis Officers.

TABLE B.

ADMINISTRATIVE COUNTY OF LANCASTER.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

SUMMARY OF NOTIFICATIONS FROM PULMONARY AND OTHER FORMS OF TUBERCULOSIS DURING THE FIFTY-TWO WEEKS ENDED 2ND JANUARY, 1915.

	NOTIFICATIONS ON FORMS A AND B—Excluding Duplicates.																																Total Notifi- cations ( <i>i.e.</i> , including cases previously notified by other Doctors.)											
	PULMONARY.				NON-PULMONARY.																																							
	Lungs only.	Lungs and Larynx.	Laryngitis.	TOTAL.	ALIMENTARY.	GLANDS.						GENITO-URINARY.						JOINTS AND BONES.																Total Pul- monary and Non- Pul- monary.										
				Enteritis (Primary).	Peritonitis (Abdominal Tuberculosis).	Tubes (Mesenteric Glands).	Axillary.	Cervical.	Inguinal.	Mediastinal.	Not Classified (Two or more Groups).	Bladder.	Fall. Tube.	Kidney.	Prostate.	Suprarenal.	Testicle and Epididymis.	Not Classified (Two or more).	(Head including Middle Ear).	Trunk.	Arm.					Leg.					Two or more different Joints.	Not Classified.	MENINGITIS (Brain).		MILIARY (Generalised).	SKIN (Lupus).	MISCELLANEOUS.	TOTAL.						
Twelve weeks, 10th Jan. to 28th March, 1914 ..	717	7	4	728	3	45	13	2	87	2	..	2	1	..	2	..	1	3	..	4	2	15	1	..	2	1	..	..	7	24	4	9	1	..	3	3	1	23	5	8	24	298	1026	1055
Thirteen weeks ended 27th June, 1914 ..	793	12	4	809	4	42	7	1	125	..	..	9	..	1	1	..	1	6	..	10	3	20	..	..	..	3	..	..	13	14	1	13	2	..	10	2	1	39	7	7	22	364	1173	1233
Thirteen weeks ended 26th September, 1914	613	7	3	623	10	39	8	..	60	1	1	5	..	..	3	..	1	3	..	2	4	13	1	..	2	1	1	..	7	18	2	8	..	..	5	..	2	22	4	5	14	242	865	910
Fourteen weeks ended 2nd January, 1915 ..	646	8	6	660	5	32	2	..	60	..	..	4	1	..	1	..	..	4	..	4	7	7	2	..	..	2	1	..	9	19	2	9	1	..	4	..	1	17	4	6	32	236	896	932
Total .. ..	2769	34	17	2820	22	158	30	3	332	3	1	20	2	1	7	..	3	16	..	20	16	55	4	..	4	7	2	..	36	75	9	39	4	..	22	5	5	101	20	26	92	1140	3960	4130

		NOTIFICATIONS ON FORMS A AND B—Excluding Duplicates.																								NOTIFICATIONS, FORM B ONLY. (By School Medical Inspectors.)								Number of Cases Notified on Form C. (Admissions.)		Number of Cases notified on Form D (Dis- charges from Institu- tions).																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		PULMONARY.												NON-PULMONARY.												Total Pul- monary and Non- Pul- monary.	PRIMARY NOTIFICATIONS. (i.e., excluding duplicates.)				Total Notifica- tions (i.e., including cases previously notified by other Doctors.)	Poor Law Insti- tutions.	Sana- toria.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and up- wds	TOTAL.	TOTAL M. & F.	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and up- wds		TOTAL.	TOTAL M. & F.	Under 5.	5 to 10.				10 to 15.	TOTAL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		M.	F.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.





TABLE C.

## ADMINISTRATIVE COUNTY OF LANCASTER

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

ANALYSIS OF THE NOTIFICATIONS (EXCLUDING DUPLICATES) RECEIVED DURING THE FIFTY-TWO WEEKS  
ENDED 2ND JANUARY, 1915.

AGE—YEARS :—		..	0 — 1			1 — 5			5 — 10			10 — 15			15 — 20			20 — 25			25 — 35			35 — 45			45 — 55			55 — 65			65 & upwds.			TOTALS.				
SEX.	Col.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	Col.		
PULMONARY—																																								
Lungs only ..	1	6	3	9	38	32	70	79	114	193	82	107	189	110	139	249	169	178	347	317	333	650	305	224	529	235	103	338	105	47	152	23	20	43	1469	1300	2769	1		
Lungs and Larynx ..	2	..	..	..	1	..	1	1	1	2	..	..	..	1	1	2	2	2	4	7	2	9	9	..	9	4	2	6	1	..	1	..	..	..	26	8	34	2		
Laryngitis ..	3	..	..	..	1	..	1	..	..	..	1	..	1	1	..	1	1	1	2	5	1	6	1	1	2	1	2	3	1	..	1	..	..	..	12	5	17	3		
PULMONARY TOTAL ..	4	6	3	9	40	32	72	80	115	195	83	107	190	112	140	252	172	181	353	329	336	665	315	225	540	240	107	347	107	47	154	23	20	43	1507	1313	2820	4		
Cases—Pulmonary and Non-Pulmonary combined ..																																								
	2	4	6	8	..	8	10	3	13	3	4	7	4	5	9	..	..	..	5	5	10	3	1	4	2	..	2	1	..	1	..	..	..	38	22	60				
NON-PULMONARY—																																								
ALIMEN- TARY	Enteritis ..	5	4	4	8	1	4	5	3	2	5	..	..	..	..	..	..	2	1	3	..	..	..	..	..	..	1	1	..	..	..	..	..	..	10	12	22	5		
	Peritonitis ..	6	12	10	22	22	25	47	14	15	29	8	16	24	13	9	22	2	5	7	3	2	5	..	2	2	..	..	..	..	..	..	..	74	84	158	6			
GLANDS	(Abdominal Tuberculosis)																																							
	Tabes ..	7	2	3	5	3	4	7	1	2	3	5	1	6	1	1	2	..	1	1	..	4	4	1	..	1	..	1	1	..	..	..	..	13	17	30	7			
	(Mesenteric Glands)																																							
	Axillary ..	8	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	8			
	Cervical ..	9	3	..	3	22	14	36	41	41	82	39	36	75	20	37	57	9	22	31	7	23	30	4	7	11	2	2	4	1	2	3	..	..	..	148	184	332	9	
GENITO- URINARY	Inguinal ..	10	..	..	..	..	1	1	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	10			
	Mediastinal ..	11	..	..	..	..	..	1	..	2	5	7	5	3	8	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	11				
	Not Classified ..	12	..	..	..	..	1	1	2	5	7	5	3	8	..	..	..	2	..	2	1	..	1	..	..	1	..	1	..	..	..	..	11	9	20	12				
	(Two or more Groups)																																							
	Bladder ..	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	2	13			
JOINTS AND BONES	Fall. Tube ..	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	1	14		
	Kidney ..	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	3	1	..	1	1	..	1	..	1	..	..	..	5	2	7	15			
	Prostate ..	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16			
	Suprarenal ..	17	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17			
	Testicle and Epididymis ..	18	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5	3	..	3	4	1	4	..	1	1	1	..	1	..	1	..	2	..	1	2	3	17		
JOINTS AND BONES	Not Classified ..	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	1	16	18				
	(Two or more)																																				19			
	Head ..	20	2	1	3	3	2	5	4	..	4	1	2	3	..	..	..	..	..	..	1	1	1	3	4	..	..	..	..	..	..	..	..	11	9	20	20			
	(Including Middle Ear)																																							
	Trunk—																																							
	Ribs and Sternum ..	21	..	..	..	..	1	1	1	1	2	1	..	1	..	..	1	2	3	4	2	6	..	1	1	1	..	1	1	..	1	..	..	9	7	16	21			
	Spine ..	22	..	..	..	8	2	10	5	2	7	4	3	7	4	4	8	7	3	10	4	3	7	2	..	2	3	1	4	..	1	..	..	37	18	55	22			
	ARM—																																							
	Shoulder ..	23	..	..	..	1	..	1	..	..	..	..	1	1	1	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	3	1	4	23			
	Scapula ..	24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	24			
	Humerus ..	25	..	..	..	..	..	1	..	1	1	1	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25			
	Elbow ..	26	..	..	..																																			



**Cancer, Malignant Disease.**—The number of deaths registered as due to cancer continues to increase, the fatalities in 1914 being 1,668, or 50 in excess of the deaths in 1913, and 202 more than in 1912. The County cancer death-rate equalled 0·95 per 1,000 of the population, the highest recorded. The rate for England and Wales in 1913 corresponded to 1·05—males 0·94, females 1·15.

The deaths and rates for each year since 1900 (when cancer was first included in the Local Government Board tables) are given below :—

Year.	No. of Deaths.	Death-rate per 1,000 living.		
		County.	Urban Districts	Rural Districts.
1900	1,072	0·54	...	...
1901	1,149	0·62	...	...
1902	1,113	0·60	...	...
1903	1,223	0·65	...	...
1904	1,229	0·65	...	...
1905	1,164	0·65	...	...
1906	1,214	0·69	0·69	0·68
1907	1,254	0·70	0·69	0·77
1908	1,283	0·71	0·71	0·60
1909	1,374	0·75	0·74	0·77
1910	1,333	0·74	0·74	0·70
1911	1,493	0·86	0·85	0·89
1912	1,466	0·83	0·83	0·86
1913	1,618	0·92	0·91	0·97
Average 1900-13	1,284	0·70	...	...
1914	1,668	0·95	0·95	0·94

**Notification of Infectious Diseases.**—Under the Infectious Diseases (Notification) Act, 1889, 16,737 cases were reported, or 3,292 more than in the preceding year. Scarlet fever had an increased prevalence represented by no less than 3,497 cases, diphtheria contributed 250 more cases,



erysipelas 266, ophthalmia neonatorum 175, whilst there was a decrease of 428 in the non-pulmonary tuberculosis notifications, enteric fever 225, measles 198, pulmonary tuberculosis 104, &c.

In the following table the cases notified during 1914 and in the previous year are classified :—

Diseases.	1914.			1913.		
	Urban Districts.	Rural Districts.	Total.	Urban Districts.	Rural Districts.	Total.
Small-pox .....	14	...	14	10	...	10
Scarlet Fever .....	7336	939	8275	4055	723	4778
Diphtheria and Membranous Croup .....	1457	275	1732	1204	278	1482
Typhus Fever .....	...	...	...	...	...	...
Enteric Fever .....	575	75	650	757	118	875
Continued Fever...	3	...	3	4	...	4
Puerperal Fever ...	129	15	144	99	9	108
Erysipelas .....	1149	135	1284	911	107	1018
Measles .....	119	...	119	317	...	317
Chicken-pox .....	129	...	129	85	...	85
Relapsing Fever ...	...	1	1	...	...	...
Ophthalmia Neonatorum .....	271	19	290	111	4	115
Cerebro-Spinal Meningitis .....	6	1	7	9	1	10
Acute Poliomyelitis	15	2	17	30	8	38
Pulmonary Tuberculosis .....	2676	258	2934	2739	299	3038
Other forms of Tuberculosis ...	1058	80	1138	1418	148	1566
Others .....	...	...	...	...	1	1
Total.....	14937	1800	16737	11749	1696	13445

Measles is compulsorily notifiable in only two districts, viz., St. Annes-on-the-Sea and Standish-with-Langtree, and chicken-pox is notifiable at Bacup (B.) and Royton, and for six months from 7th August 1914 at Heywood (B.)

The following information is extracted from a report of the Local Government Board on the incidence of notifiable infectious diseases in England and Wales during the year 1914 :—

	Incidence per 1,000 of the estimated population.			
	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.
England and Wales ...	4.47	1.61	0.24	0.06
Administrative County of Lancaster ... ..	4.71	0.99	0.36	0.08
Cheshire ... ..	4.09	1.37	0.13	0.05
Derbyshire ... ..	5.50	2.16	0.11	0.07
Durham ... ..	7.94	1.70	0.59	0.05
Essex ... ..	3.24	1.54	0.19	0.04
Kent ... ..	3.59	2.44	0.25	0.04
Middlesex ... ..	4.81	1.82	0.14	0.06
Nottinghamshire ... ..	5.32	1.69	0.22	0.03
Staffordshire ... ..	3.04	1.45	0.12	0.06
Warwickshire ... ..	4.34	1.39	0.13	0.04
Yorkshire, North Riding	3.65	1.74	0.19	0.03
„ West Riding	4.14	1.63	0.48	0.06

**Isolation Hospitals.**—The following statement gives brief particulars of the hospital accommodation provided in or for each of the County districts, together with (a) the number of notifications of small-pox, scarlet fever, diphtheria, and enteric fever, and (b) the number of removals to hospital:—

District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	†Diphtheria.	Scarlet Fever.	Enteric Fever.
	For ordinary Infectious Diseases.	For Small-pox.					
Abram .. ..	8 beds .. ..	Iron building— 4 beds*	(a) .. (b) ..	20 3	50 50	7 6	
Accrington (B.).	Nil .. ..	24 beds ..	(a) .. (b) ..	36 ..	95 ..	10 ..	

\* Combined under the Wigan and District Joint Hospital Order for the purpose of providing a small-pox hospital.

† Includes croup.

District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever.
	For ordinary Infectious Diseases.	For Small-pox.					
Adlington ..	Joint at Heath Charnock, 36 beds	Nil	(a) ..	..	..	6	1
			(b) ..	..	..	6	..
Chorley (B.) ..			(a) ..	..	8	82	11
			(b) ..	..	3	78	9
Leyland ..			(a) ..	..	2	8	2
			(b) ..	..	..	7	1
Chorley (R.) ..			(a) ..	..	17	26	14
			(b) ..	..	4	23	6
Barrowford ..	At Burnley, &c., joint hospital	At Nelson Boro. hospital	(a) ..	..	5	9	..
			(b) ..	..	..	..	..
Bispham-with-Norbreck	Joint at Moss Side		(a) ..	..	2	2	..
			(b) ..	..	..	2	..
Fleetwood ..			(a) ..	..	25	54	1
			(b) ..	..	15	43	..
Kirkham ..			(a) ..	..	3	3	3
			(b) ..	..	3	..	3
Lytham ..			(a) ..	..	46	24	7
			(b) ..	..	42	18	5
Poulton-le-Fylde			(a) ..	..	..	3	2
			(b) ..	..	..	2	2
St. Annes-on-the-Sea			(a) ..	..	53	13	6
			(b) ..	..	30	4	5
Thornton ..		Joint at Elswick	(a) ..	..	..	9	..
			(b) ..	..	..	9	..
Fylde (R.) ..			(a) ..	..	13	44	3
			(b) ..	..	11	7	2
Preesall ..	At Fylde, &c., joint (Moss Side)		(a) ..	..	2	..	..
			(b) ..	..	..	..	..
Fulwood ..	Joint at Fulwood		(a) ..	..	6	60	2
			(b) ..	..	2	30	..
Longridge ..			(a) ..	..	2	22	1
			(b) ..	..	1	16	1
Preston (R.) ..			(a) ..	..	13	137	3
			(b) ..	..	11	125	3
Garstang (R.) ..	Nil. Plans for new hospital decided upon		(a) ..	..	2	20	..
			(b) ..	..	..	..	..



District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever
	For ordinary Infectious Diseases.	For Small-pox.					
Ashton-in-Makerfield	40 beds (Long Lane)	8 beds (Edge Green)*	(a) .. (b) ..	..	32 19	150 119	20 18
Aspull .. ..	At Wigan Borough hospitals* ..		(a) .. (b) ..	..	12 ..	21 4	16 10
Ashton-under-Lyne (B.)	20 beds .. ..	Joint at Hartshead—12 beds	(a) .. (b) ..	..	20 ..	357 107	14 7
Audenshaw ..	2 beds, Hyde Borough hospital		(a) .. (b) ..	..	10 ..	62 5	.. ..
Hurst .. ..	Nil .. ..		(a) .. (b) ..	..	5 ..	79 ..	3 ..
Limehurst (R.) ..	Nil .. ..		(a) .. (b) ..	..	5 ..	135 †13	5 †3
Atherton ..	Joint at Astley for all purposes ..	Joint at Todmorden—32 beds	(a) .. (b) ..	..	61 18	61 34	9 6
Golborne ..			(a) .. (b) ..	..	2 1	7 1	6 6
Leigh (B.) ..			(a) .. (b) ..	..	67 31	441 257	10 6
Tyldesley-with-Shakerley			(a) .. (b) ..	..	16 3	138 87	21 12
Leigh (R.) ..	Arrangements made with Bury Joint Hospital Board	Joint at Todmorden—32 beds	(a) .. (b) ..	..	8 1	28 13	6 3
Bacup (B.) ..			(a) .. (b) ..	2 2	17 3	193 12	6 ..
Blackrod ..			(a) .. (b) ..	..	5 3	12 9	.. ..
Horwich ..			(a) .. (b) ..	..	18 9	74 63	3 2
Westhoughton ..	Cottage — 4 beds*	Do.—12 beds* ..	(a) .. (b) ..	..	33 22	38 32	11 10
Billinge .. ..	Nil .. ..		(a) .. (b) ..	..	4 ..	1 ..	1 ..

† Treated by arrangement at Ashton and Oldham hospitals

District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever
	For ordinary Infectious Diseases.	For Small-pox.					
Brierfield ..	Joint with Burnley (C.B.) for all purposes (Kibble Bank)	(Crown Point)	(a) ..	13	19	10	
			(b) ..	8	17	8	
Padiham ..			(a) ..	6	15	1	
			(b) ..	5	10	1	
Burnley (R.) ..			(a) ..	13	55	6	
			(b) ..	8	27	3	
Carnforth ..	2 wards—12 beds (Crag Bank)	Nil .. ..	(a) ..	..	..	..	
			(b) ..	..	..	..	
Chadderton ..	At Oldham Boro. hospital	Joint at Cinder Hill—24 beds	(a) ..	25	203	9	
			(b) ..	2	97	6	
Crompton ..	Do. ..		(a) ..	15	92	..	
			(b) ..	6	52	..	
Royton ..	Do. ..		(a) ..	16	89	..	
			(b) ..	3	29	..	
Church ..	Nil .. ..	At Finnington (Blackburn)	(a) ..	5	9	3	
			(b) ..	..	..	..	
Clayton-le-Moors	At Burnley, &c., joint hospital	At Accrington Boro. hospital	(a) ..	25	31	4	
			(b) ..	..	..	1	
Clitheroe (B.) ..	Nil .. ..	Joint with Bowland (Yorks)—12 beds	(a) ..	3	11	3	
			(b) ..	..	..	..	
Clitheroe (R.) ..	Nil .. ..		(a) ..	14	14	2	
			(b) ..	..	..	..	
Colne (B.) ..	10 beds ..	20 beds ..	(a) 1	15	51	33	
			(b) 1	..	..	1	
Croston ..	At West Lancashire Rural hospital	Nil .. ..	(a) ..	2	4	1	
			(b) ..	..	2	1	
Dalton-in-Furness	Joint at High Carley—24 beds	At Barrow Boro. hospital	(a) ..	15	58	1	
			(b) ..	9	48	1	
Ulverston ..			(a) ..	1	5	1	
			(b) ..	1	5	..	
Ulverston (R.)..			(a) ..	13	13	6	
			(b) ..	3	8	3	
Darwen (B.) ..	20 beds for scarlet fever; 8 for enteric fever	Converted farmhouse—2 beds	(a) ..	20	206	10	
			(b) ..	..	89	..	
Denton ..	4 beds, Hyde Boro. hospital	2 beds, Hyde ..	(a) ..	19	192	1	
			(b) ..	1	38	..	

District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever
	For ordinary Infectious Diseases.	For Small-pox.					
Droylsden ..	5 beds, Hyde Boro. hospital	1 bed, Hyde ..	(a) .. (b) ..	9 ..	81 20	5 2	
Eccles (B.) ..	20 beds, Salford Boro. hospital	6 beds, Salford..	(a) .. (b) ..	64 37	249 63	8 8	
Failsworth ..	At Oldham Boro. hospitals ..		(a) .. (b) ..	20 1	141 22	1 ..	
Farnworth ..	} Joint at Farnworth	} At Bury, &c., joint hos- pital	(a) .. (b) ..	4 3	107 96	13 12	
Little Hulton ..			(a) .. (b) ..	5 1	25 16	7 5	
Little Lever ..			(a) .. (b) ..	1 ..	70 27	5 5	
Formby .. ..			At Bootle Boro. hospitals .. ..		(a) .. (b) ..	5 ..	8 2
Grange-over-Sands	At Kendal Boro. hospital	At Barrow Boro. hospital	(a) .. (b) ..	2 1	12 8	.. ..	
Great Crosby ..	At Liverpool Boro. hospitals ..		(a) .. (b) ..	14 8	50 30	4 1	
Great Harwood..	Nil .. ..	Nil .. ..	(a) .. (b) ..	15 ..	82 ..	.. ..	
Haslingden (B.).	Agreement with Bury & District Joint Hospital Board		(a) .. (b) ..	19 1	71 3	9 1	
Haydock ..	10 beds at St. Helens Boro. hospital	3 beds, St. Helens	(a) .. (b) ..	19 ..	9 6	.. ..	
Heysham ..	4 beds .. ..	4 beds .. ..	(a) .. (b) ..	.. ..	11 11	5 ..	
Heywood (B.) ..	At Rochdale hos- pital (Marland)	Bury & District Joint Board at Birtle	(a) .. (b) ..	8 ..	239 60	5 ..	
Hindley.. ..	Question of pro- vision of new hospital still in abeyance	8 beds* (used for enteric fever)	(a) .. (b) ..	14 †1	78 †12	19 14	
Huyton-with-Roby	3 beds, Whiston sanatorium	At Whiston ..	(a) .. (b) ..	3 2	23 20	.. ..	

† Removed to Abram and Horwich hospitals.



District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever	
	For ordinary Infectious Diseases.	For Small-pox.						
Ince-in-Makerfield	15 beds .. ..	12 beds* ..	(a) .. (b) ..	.. ..	18 2	72 46	11 6	
Irlam .. ..	At Salford Boro. hospital (no contract)	2 beds, Salford..	(a) .. (b) ..	.. ..	18 ..	13 1	2 ..	
Kearsley .. ..	At Salford Boro. hospital	At Bury, &c., joint hospital	(a) .. (b) ..	.. ..	2 ..	40 ..	7 ..	
Lancaster (B.) ..	42 beds .. ..	11 beds, Little-fell	(a) .. (b) ..	.. ..	56 12	237 203	28 27	
Lathom and Burscough	} Joint at Green Lane—26 beds	} Joint at Burscough—12 beds	(a) .. (b) ..	.. ..	5 3	77 55	.. ..	
Ormskirk .. ..			(a) .. (b) ..	.. ..	2 2	86 77	2 2	
Lees .. ..	At Oldham Boro. hospitals. Joint scheme in contemplation.		(a) .. (b) ..	.. ..	3 ..	64 1	.. ..	
Litherland .. ..	At Bootle Boro. hospitals .. ..		(a) .. (b) ..	.. ..	8 5	58 38	1 ..	
Little Crosby ..	At Liverpool Boro. hospitals ..		(a) .. (b) ..	.. ..	.. ..	1 1	.. ..	
Littleborough ..	} Joint at Smithy Bridge (16 beds)	} At Bury, &c., joint hospital	(a) .. (b) ..	.. ..	11 3	56 46	3 3	
Milnrow .. ..			(a) .. (b) ..	11 11	3 1	43 38	2 ..	
Wardle .. ..			(a) .. (b) ..	.. ..	2 2	13 11	.. ..	
Middleton (B.) ..			At Rochdale Boro. hospital	At Chadderton, &c., joint hospital	(a) .. (b) ..	.. ..	20 ..	214 132
Morecambe (B.) ..	25 beds and 2 cots for scarlet fever.	10 beds and 1 cot	(a) .. (b) ..	.. ..	5 ..	25 24	4 ..	
Mossley (B.) .. ..	Nil .. ..	8 beds, May Hills	(a) .. (b) ..	.. ..	5 ..	108 ..	.. ..	
Nelson (B.) .. ..	Composite building just completing	32 beds (Catlow)	(a) .. (b) ..	.. ..	22 ..	49 ..	4 ..	
Newton-in-Makerfield	26 beds .. ..	At Liverpool Boro. hospital	(a) .. (b) ..	.. ..	40 22	63 53	.. ..	
Norden .. ..	Nil .. ..	Converted farmhouse—4 beds	(a) .. (b) ..	.. ..	.. ..	79 ..	.. ..	

District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever
	For ordinary Infectious Diseases.	For Small-pox.					
Orrell .. ..	Nil .. ..	Nil* .. ..	(a) .. (b) ..	..	5 ..	15 ..	1 ..
Oswaldtwistle ..	Nil .. ..	6 beds (used for 4 scarlet fever cases)	(a) .. (b) ..	..	17 ..	51 ‡5	2 ..
Prescot .. ..	At Whiston sanatorium .. ..		(a) .. (b) ..	..	5 .. 3 ..	11 .. 8 ..	5 .. 3 ..
Prestwich .. ..	At Salford Boro. hospitals .. ..		(a) .. (b) ..	..	3 .. 1 ..	109 .. 42 ..	6 .. ..
Rainford .. ..	Nil .. ..	4 beds (used for scarlet fever)	(a) .. (b) ..	..	6 .. ..	9 .. 4 ..	2 .. ..
Rawtenstall (B.)	Arrangement made with Bury & District Joint Hospital Board		(a) .. (b) ..	..	39 .. 3 ..	172 .. 10 ..	3 .. 1 ..
Radcliffe .. ..			(a) .. (b) ..	..	14 .. 8 ..	72 .. 54 ..	6 .. 4 ..
Ramsbottom .. ..			(a) .. (b) ..	..	20 .. 7 ..	54 .. 21 ..	7 .. 7 ..
Tottington .. ..			(a) .. (b) ..	..	11 .. 10 ..	19 .. 16 ..	.. .. .. ..
Whitefield .. ..			(a) .. (b) ..	..	2 .. 1 ..	21 .. 11 ..	.. .. .. ..
Bury (R.) .. ..			(a) .. (b) ..	..	9 .. 6 ..	71 .. 28 ..	2 .. 1 ..
Rishton .. ..	Nil. "Occasionally" send to Blackburn	Nil .. ..	(a) .. (b) ..	..	11 .. .. ..	36 .. .. ..	2 .. .. ..
Skelmersdale ..	30 beds, and at West Lancashire hospital (if required)	Nil .. ..	(a) .. (b) ..	..	19 .. .. ..	17 .. 17 ..	4 .. 4 ..
Standish-with-Langtree	Nil .. ..	Cottage—6 beds*	(a) .. (b) ..	..	6 .. .. ..	26 .. .. ..	9 .. .. ..
Stretford .. ..	At Salford Boro. hospitals .. (18 beds)	.. .. (6 beds)	(a) .. (b) ..	..	34 .. 11 ..	333 .. 190 ..	7 .. 5 ..
Swinton and Pendlebury	At Salford Boro. hospital	Joint at Linnyshaw Moss—20 beds	(a)† .. (b) ..	..	30 .. 5 ..	181 .. 25 ..	14 .. 5 ..
Worsley .. ..	Do. (6 beds)		(a) .. (b) ..	..	10 .. 1 ..	65 .. 5 ..	6 .. 1 ..

† Exclusive of cases in children's hospital. ‡ One case removed to Blackburn.

District.	Hospital Provision.		(a) Cases notified. (b) Removed to hospital.	Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever.
	For ordinary Infectious Diseases.	For Small-pox.					
Trawden ..	Negotiations in progress with Colne (B.)	At Colne Boro. hospital	(a) .. (b) ..	..	..	..	13 †1
Turton ..	At Bury, &c., joint hospital	4 beds (Bury, &c., joint hospital)	(a) .. (b) ..	..	5	33 4	2 ..
Upholland ..	Nil .. ..	Tent* .. ..	(a) .. (b) ..	..	1	38	20 ‡3
Urmston ..	At Salford Boro. hospitals .. (5 beds)	(2 beds)	(a) .. (b) ..	..	6 1	17 5	3 3
Walton-le-Dale..	20 beds (School Lane)	8 beds (Brad-kirk)	(a) .. (b) ..	..	13 5	102 95	14 13
Waterloo-with-Seaforth	At Liverpool Boro. hospitals ..		(a) .. (b) ..	..	37 21	164 78	6 3
Whitworth ..	Nil .. ..	Cottage—12 beds	(a) .. (b) ..	..	10	29	3 ..
Widnes (B.) ..	36 beds (Crow Wood)	8 beds (Barrow's Green)	(a) .. (b) ..	..	39 35	134 106	.. ..
Withnell ..	24 beds .. ..	1 bed at Finnington (Blackburn)	(a) .. (b) ..	..	..	12 10	.. ..
Barton-upon-Irwell (R.)	At Salford Boro. hospitals .. (5 beds)	(2 beds)	(a) .. (b) ..	..	4 1	47 26	1 ..
Blackburn (R.)..	At Blackburn Boro. hospitals ..		(a) .. (b) ..	..	5 ..	60 9	1 ..
Lancaster (R.)..	At Lancaster Boro. hospitals ..		(a) .. (b) ..	..	1 ..	14 11	1 ..
Lunesdale (R.)..	13 beds at Farleton .. ..	.. ..	(a) .. (b) ..	..	4 3	6 4	2 ..
Sefton (R.) ..	At Liverpool Boro. hospitals ..		(a) .. (b) ..	..	4 4	9 6	1 ..
Warrington (R.)	At Warrington Boro. hospital	Nil .. ..	(a) .. (b) ..	..	8 1	95 3	8 ..
West Lancashire (R.)	26 beds (Aughton)	Tent—8 beds ..	(a) .. (b) ..	..	88 71	74 62	6 4
Whiston (R.) ..	34 beds .. ..	20 beds .. ..	(a) .. (b) ..	..	52 41	80 60	4 4
Wigan (R.) ..	Nil .. ..	Cottage—4 beds*	(a) .. (b) ..	..	2	11	4 ..

Treated at †Burnley, ‡ Wigan.



As in previous years, several Authorities claiming to have made arrangements to send infectious cases to hospitals belonging to other districts have taken little or no advantage of the privilege.

The table below gives the total number of cases of small-pox, scarlet fever, diphtheria, and enteric fever removed to hospital in 1914, and contrasts the mortality of cases treated in hospital with those treated at home :—

	Total cases notified.	Hospital Treatment.			Home Treatment.		Case mortality per cent.	
		Cases removed to hospital.	Percentage of removals.	Deaths in hospital.	Cases treated at home.	Deaths at home.	In hospital.	At home.
Small-pox ..	14	14	100·0	..	..	..	..	..
Scarlet Fever.	8275	3635	43·9	75	4640	94	2·06	2·02
Diphtheria ..	1732	627	36·2	49	1105	181	7·81	16·38
Enteric Fever.	650	340	52·3	47	310	76	13·82	24·51

The percentage of removals of scarlet fever cases declined from 44·6 in 1913 to 43·9, whilst the percentage of diphtheria removals rose from 31·5 to 36·2, and enteric fever removals from 47·8 to 52·3.

The summaries of district reports, pages 1 to 222, give the position of each sanitary district as regards isolation hospital accommodation, together with the total number of removals.

The following references regarding hospital provision are taken from the district reports :—

Chorley Joint Hospital Board's Area.—This combined area is now without provision for small-pox, the arrangement whereby 10 beds at Finnington hospital, Blackburn, were reserved for treatment of cases of this disease, having been terminated.

Lathom and Burscough.—Dr. Laing recommends, in order to minimise the possibility of return cases, that a small cottage be rented for the reception of scarlet fever cases from hospital during the last 10 or 14 days of their convalescence.

Lees.—Consideration being given to a proposal to form a Joint Hospital Board for Lees and two adjoining districts in the West Riding of Yorkshire.

Morecambe (B.).—Extension of existing hospital accommodation contemplated to allow of the treatment of enteric fever and diphtheria cases.

Nelson (B.).—Composite building, with accommodation for 16 patients, just completed.

Oswaldtwistle.—Existing small-pox hospital not suitable. Question of erecting a new hospital under consideration; plot of land secured.

Orrell.—Committee appointed to report on any building with a suitable site adjoining, with a view to the erection of a hospital thereon.

**Disinfection.**—From information extracted from the reports of district Medical Officers of Health, the position of the County districts in regard to disinfecting apparatus is as follows :—

Districts provided with steam apparatus	...	25
„ using steam apparatus at infectious hospitals	... ..	47
„ using steam apparatus belonging to other districts (mainly County or Municipal Boroughs)	... ..	19
„ provided with dry-heat apparatus...		1
„ using dry-heat apparatus belonging to other districts	... ..	2
„ without proper appliances	... ..	29
		<hr/>
		123
		<hr/>

As pointed out in previous reports, the provision of efficient steam appliances remains very inadequate, many districts with large populations being unprovided in this respect.

During the year steam apparatus was installed at Clitheroe (B.) and Ramsbottom. The Medical Officers of Health of Chadderton, Failsworth, Heywood (B.), Oswaldtwistle, &c., impress upon their Councils the necessity of acquiring up-to-date appliances.

Houses (or rooms) fumigated numbered 12,963.

**Sanitary Administration.**—Reference is made in the appended summaries to the sanitary work accomplished in each district.

**NUISANCES.**—During the year under report the nuisances abated numbered 55,938 (51,279 in urban districts and 4,659 in rural districts), as compared with 53,442 last year, and 43,600 in 1912. Notices served amounted to 24,492, against 26,766 in 1913 and 23,739 in 1912. Legal proceedings with respect to nuisances were instituted in 59 instances.

The majority of the district reports contain ample evidence that sanitation has received much attention during the year, but as will be seen on reference to the remarks respecting closet accommodation in the County, to the unsatisfactory conditions of cowsheds in many districts, and to the inadequate housing accommodation in certain areas, there still remains much to be done. Local Authorities are asked not to unduly relax the standard of public health administration in their areas, but the Government, in a recent circular, request them to refrain from requiring the execution of work unless such work is urgently necessary for the removal of nuisances, or for the protection of health.



ADOPTIVE ACTS.—The following Acts are in force in the County districts as given below :—

	Adopted.	Not Adopted.
Infectious Disease Prevention Act, 1890 ... ..	106	17
Public Health Acts Amend- ment Act, 1890 ... ..	114	9
Public Health Acts Amend- ment Act, 1907 ... ..	91	32
Notification of Births Act, 1907 (at end of 1914) ...	39	84

CLOSET ACCOMMODATION.—Information has been collated respecting the closet accommodation of the County, and the following statement gives approximately the number of each type of closet in existence :—

Privy middens ... ..	64,456
Pail closets ... ..	50,508
Fresh-water closets ... ..	178,072
Waste-water closets ... ..	90,384

PRIVY MIDDENS.—The number of privy conversions shows a slight diminution as compared with the preceding year, as will be seen below :—

	1914.	1913.	1912.
Privies converted to water closets.	6,106 ...	7,096 ...	5,434
Privies converted to pail closets...	217 ...	347 ...	553
Pail closets con- verted to water closets .....	3,098 ...	2,881 ...	1,603

Considerable progress was made in the following areas towards the abolition of the privy system, the number of conversions in 1914 being—Audenshaw 153, Denton 159, Droylsden 191, Farnworth 331, Hindley 179, Horwich 147, Kearsley 140, Leigh (B.) 134, Prestwich 142, Radcliffe 260, Swinton and Pendlebury 300, Tyldesley-with-Shakerley 354,

Westhoughton 153, Widnes (B.) 1,474, Worsley 108, &c., but in many of these districts very large numbers of privies remain to be dealt with.

Conversions of pail closets to the water-carriage system were most numerous in Bacup (B.) 121, Chadderton 127, Darwen (B.) 1,856. and Rawtenstall (B.) 252.

In many districts in which the privy type of accommodation predominates, little or no activity was shown as regards conversion, for instance, Billinge 603 privies no conversions, Carnforth 242 privies 5 conversions, Croston 292 no conversions, Formby 212 (none), Ince-in-Makerfield 1,072 (13), Lathom and Burscough 1,350 (17), Leyland 841 (5), Little Lever 742 (9), Ormskirk 533 (6), Orrell 484 (9), Preesall 268 (5), Prescott 806 (8), Rainford 700 (none), Standish-with-Langtree 1,006 (3), Ulverston 251 (6), Upholland 360 (10), &c.

Medical Officers of Health of 35 districts report that their Authorities contribute towards the cost of privy conversion, some bearing half the cost, others varying amounts up to £4 ; several assist by laying the necessary drains and making the connections to sewers, or by providing water free of cost.

As showing the views of Medical Officers of Health on the necessity for the abolition of the privy and pail types of accommodation, the following extracts are given :—

Padiham.—Dr. Dharmavir states that he has to call the attention of the Council year after year to the necessity of abolishing the filthy excreta pails. The deposit of highly offensive decomposing organic matter in the vicinity of dwelling-houses ; the nuisance from the lodging of fluid in the closet area, or its running out in the street in consequence of the leaking of some of the pails ; the employment of the costly machinery of human labour in collecting, carting, and depositing the human filth on adjoining farm lands, and its accumulation there in the summer months, with potential

danger to public health, are matters of common knowledge, and it requires no great stretch of imagination to understand that the continued use of this antiquated method is a constant menace to the health of men, women, and children.

Leigh (B.).—There is an urgent need for a general substitution of ashbins in place of the old open ashpits, which, in Dr. Webb's opinion, are only a slightly lesser evil than the privy midden. The question of the general health of a community, and particularly the infant death-rate from epidemic diarrhœa, is so intimately connected with the sanitary conditions of households and yards that the sooner all privies and ashpits are done away with the better for the residents in the Borough. The remaining privies are now under notice for conversion.

Radcliffe.—Referring to the provision of waste-water closets, Dr. Farquharson points out that these are very unsatisfactory, and recommends the adoption of a bye-law by the Authority prohibiting this type of closet.

Clitheroe (R.).—A more offensive nuisance can hardly be conceived to neighbours and passers by than the emptying of a privy midden, especially when the contents have been allowed to accumulate for a year or more.

**Housing of the Working Classes.**—The action taken by each District Council in regard to housing accommodation is briefly set out in the appended summaries, and the following tabulated statement, compiled from the reports, supplemented in some instances by further enquiries, shows the amount of work accomplished during the year under report. Evidence is available of considerable activity in many districts in the direction of improving unsatisfactory housing conditions; many housing schemes, some of a comprehensive nature, have been prepared, but owing to the war the majority are for the present in abeyance.



DISTRICT.	Dwelling-houses		No. of Representations to Authority with a view to the making of Closing Orders.	No. of Closing Orders made.	Dwelling-houses.		
	No. Inspected under Sec. 17 of 1909 Act. *	No. considered unfit for human habitation.			No. in which defects remedied without Closing Orders.	No. made habitable after the making of Closing Orders.	No. demolished.
URBAN.							
Abram .....	35	7	7	7	27	4	..
Accrington (B.) .....	155	3	3	3	117	2	3
Adlington .....	232	..	..	..	..	..	..
Ashton-in-Makerfield.	462	5	5	..	2	1	12
Ashton-under-Lyne (B.) .....	4987	13	13	13	..	..	..
Aspull .....	53	..	..	..	31	..	..
Atherton .....	294	7	7	7	256	..	..
Audenshaw .....	409	..	..	..	5	..	..
Bacup (B.) .....	43	9	9	..	..	..	..
Barrowford .....	80	..	..	..	22	..	..
Billinge .....	81	4	2	2	23	..	..
Bispham-with-Nor- breck .....	48	..	..	..	15	..	..
Blackrod .....	84	3	..	..	..	..	3
Brierfield .....	116	..	..	..	12	..	..
Carnforth .....	95	..	..	..	..	..	..
Chadderton .....	98	2	2	1	8	..	..
Chorley (B.) .....	88	79	8	8	71	..	5
Church .....	24	..	..	..	24	..	..
Clayton-le-Moors ....	97	32	32	..	3	..	..
Clitheroe (B.) .....	335	3	3	..	2	2	..
Colne (B.) .....	988	..	..	..	521	..	..
Crompton .....	811	3	..	..	183	13	3
Croston .....	49	..	..	..	..	..	..
Dalton-in-Furness ..	218	23	23	18	..	12	..
Darwen (B.) .....	35	8	8	..	..	..	8
Denton .....	35	..	..	..	17	..	..
Droylsden .....	286	2	1	1	14	1	..
Eccles (B.) .....	15	15	15	11	284	9	16
Failsworth .....	188	10	10	5	110	3	13
Farnworth .....	112	71	71	71	20	15	1
Fleetwood .....	172	..	..	..	102	..	..
Formby .....	36	..	..	..	28	..	..
Fulwood .....	150	..	..	..	..	..	..
Golborne .....	46	..	..	..	74	..	..
Grange-over-Sands ..	28	..	..	..	16	..	..
Great Crosby .....	2	2	..	..	2	..	..
Haslingden (B.) .....	305	..	7	7	..	3	..
Haydock .....	29	9	..	16	18	..	2
Heysham .....	31	..	..	..	20	..	..
Heywood (B.) ... ..	490	23	23	14	326	4	5
Hindley .....	116	21	21	21	95	5	..
Horwich .....	38	..	..	..	25	..	..
Hurst .....	1577	16	12	12	4	9	6
Huyton-with-Roby ..	297	..	..	..	5	..	..
Ince-in-Makerfield ..	38	4	34	34	4	14	..
Irlam .....	656	..	..	..	277	..	..
Kearsley .....	139	15	15	15	..	..	2
Kirkham .....	43	29	14	29	3	14	17
Lancaster (B.) .....	602	103	103	14	..	..	5
Lathom & Burscough.	43	..	..	..	..	..	..
Lees .....	65	8	8	8	95	..	..

\* In some cases the total number of ordinary house inspections is given.

DISTRICT.	Dwelling-houses		No. of Representations to Authority with a view to the making of Closing Orders.	No. of Closing Orders made.	Dwelling-houses.		
	No. Inspected under Sec. 17 of 1909 Act.	No. considered unfit for human habitation.			No. in which defects remedied without Closing Orders.	No. made habitable after the making of Closing Orders.	No. demolished.
Leigh (B.) .....	77	10	10	10	12	35	1
Leyland .....	1315	..	..	..	24	..	..
Litherland .....	153	..	..	..	107	..	..
Littleborough .....	114	..	..	..	42	..	..
Little Crosby .....	11	..	..	..	2	..	..
Little Hulton .....	178	..	..	..	50	..	..
Little Lever .....	48	35	35	..	3	..	1
Longridge .....	44	..	..	..	..	..	..
Lytham .....	259	5	..	..	4	..	..
Middleton (B.) .....	774	19	19	18	1	7	..
Milnrow .....	95	..	..	..	35	..	..
Morecambe (B.) .....	5	5	..	..	..	..	..
Mossley (B.) .....	120	5	5	4	55	1	..
Nelson (B.) .....	305	..	..	..	..	..	..
Newton-in-Makerfield .....	290	1	1	1	2	..	..
Norden .....	78	..	..	..	8	..	..
Ormskirk .....	76	..	..	..	25	..	..
Orrell .....	54	27	2	2	25	2	..
Oswaldtwistle .....	137	7	7	7	89	..	7
Padiham .....	300	94	11	11	95	..	21
Poulton-le-Fylde .....	..	..	..	..	..	..	1
Preesall .....	88	1	..	..	82	..	1
Prescot .....	204	16	16	4	7	..	5
Prestwich .....	187	..	..	..	..	..	4
Radcliffe .....	917	20	16	4	13	1	30
Rainford .....	38	..	..	..	4	..	..
Ramsbottom .....	157	1	1	1	152	..	..
Rawtenstall (B.) .....	170	20	17	17	150	..	6
Rishton .....	230	..	..	..	..	..	..
Royton .....	734	1	1	1	149	..	..
St. Annes-on-the-Sea .....	113	..	..	..	33	..	..
Skelmersdale .....	103	..	..	..	40	..	..
Standish-with- Langtree .....	88	..	..	..	69	..	..
Stretford .....	1	1	1	1	..	..	9
Swinton and Pendle- bury .....	251	197	35	35	130	14	..
Thornton .....	14	..	..	..	..	..	..
Tottington .....	118	2	2	2	36	..	2
Trawden .....	174	..	..	..	21	..	..
Turton .....	400	2	..	..	..	..	2
Tyldesley-with- Shakerley .....	350	23	1	1	22	1	..
Ulverston .....	107	7	7	7	43	..	..
Upholland .....	22	4	4	4	6	..	..
Urnston .....	54	1	..	..	43	..	..
Walton-le-Dale .....	267	56	56	..	103	..	..
Wardle .....	54	..	..	..	32	..	..
Waterloo-with- Seaforth .....	84	..	..	..	84	..	..
Westhoughton .....	83	..	..	..	74	..	2
Whitefield .....	7	7	7	7	..	..	7
Whitworth .....	157	11	11	11	..	..	..
Widnes (B.) .....	210	1	1	1	..	1	..

DISTRICT.	Dwelling-houses		No. of Representations to Authority with a view to the making of Closing Orders.	No. of Closing Orders made.	Dwelling-houses.		
	No. Inspected under Sec. 17 of 1909 Act.	No. considered unfit for human habitation.			No. in which defects remedied without Closing Orders.	No. made habitable after the making of Closing Orders.	No. demolished.
Withnell .....	70	..	..	..	2	..	1
Worsley .....	57	30	30	..	30	..	..
Total Urban Districts.	25398	1138	752	466	4765	173	201
RURAL.							
Barton-upon-Irwell ..	130	2	2	2	61	..	..
Blackburn .....	200	3	1	1	75	..	1
Burnley .....	102	7	9	..	15	2	..
Bury .....	126	10	..	..	107	..	7
Chorley .....	46	2	2	2	26	1	..
Clitheroe (Lancashire portion) .....	85	2	2	2	6	..	..
Fylde .....	371	3	3	3	7	3	..
Garstang .....	174	2	2	2	..	1	4
Lancaster .....	208	..	..	..	..	..	..
Leigh .....	184	8	..	..	161	..	..
Limehurst .....	89	..	..	..	25	..	..
Lunesdale .....	28	1	1	1	20	..	..
Preston .....	193	..	..	..	77	..	..
Sefton .....	157	2	2	2	17	..	7
Ulverston .....	579	8	8	..	127	..	..
Warrington .....	272	..	..	..	156	..	..
West Lancashire ....	611	3	3	..	126	..	..
Whiston .....	323	7	7	7	..	2	..
Wigan .....	75	..	..	..	37	..	..
Total Rural Districts.	3953	60	42	22	1043	9	19
Total Administrative County (1914) .....	29351	1198	794	488	5808	182	220
Do. (1913) .....	20376	2054	648	542	5729	276	226

Medical Officers of Health of 39 districts reported, on County Form C, that there was a deficiency of housing accommodation in their districts, and enquiries show that in the following districts the Councils themselves contemplate making further provision, or have had the matter under careful consideration :—

Abram ... Scheme for erection of 30–40 houses under consideration.

Billinge ... Erection of 10 houses contemplated.

Clitheroe (B). ... Scheme for provision of 50 houses postponed.



Eccles (B.)	... Housing scheme in hand, involving 6 $\frac{3}{4}$ acres in south-east area.
Hindley ...	... Plans prepared for erection of 34 artisan's dwellings. but held in abeyance.
Horwich ...	... Scheme for erection of 50 cottages under consideration.
Irlam ...	... Erecting 154 houses.
Leigh (B.)	... Erected 100 houses and contemplate erecting a further 200.
Little Lever	... Plans prepared for 30 houses : scheme postponed owing to war.
Middleton (B.)	... Building of 24 houses on Boarshaw estate commenced.
Newton -in - Makerfield	... Scheme deferred owing to war.
Ormskirk	... Do.
Prescot ...	... Erecting 12 artisan's dwellings—38 already completed.
Radcliffe	... Scheme in hand for erection of dwellings for working classes in Stand Lane Ward.
Rainford	... Erecting 14 houses.
Swinton and Pendlebury	... Scheme for erection of 40 houses approved by Local Government Board.
Upholland	... Scheme for erection of 8 houses in abeyance owing to war.
Whitefield	... Scheme for erection of 58 houses approved by Local Government Board, but in abeyance.

At Leigh (R.), to meet the deficiency in housing accommodation, a Colliery Company contemplate building 288

houses ; one-third of this number are nearing completion. The Chorley Town Council have decided to apply to the Local Government Board for authority to prepare an extensive town planning scheme. At Walton-le-Dale, schemes for provision of houses at Bamber Bridge and Lostock Hall have been under consideration ; similar action contemplated at Westhoughton, &c.

The following are some of the more important references in the district reports to housing matters :—

Ashton-in-Makerfield.—There is a general deficiency of housing accommodation throughout the district, and the question has been up for consideration two or three times. A large number of houses are in need of internal repair, and require regular attention. Owners do not seem to interest themselves sufficiently in this connection, as timely attention would prevent much and rapidly increasing dilapidation.

Chorley (B.).—The Town Council have decided to apply for the sanction of the Local Government Board for preparation of a town planning scheme. The area included in the proposed scheme consists of 2,980 acres approximately, and includes most of the vacant land within the Borough and certain portions of built-up areas adjoining vacant lands, principally on the south and east side of the Borough. The number of owners already referenced and affected by this scheme is about 600, and the work of referencing will shortly be completed.

Clitheroe (B.).—An inquiry in regard to the borrowing of £7,000 for erection of 50 houses under Part III. of the Housing of the Working Classes Act, 1890, arranged to be held in March, 1914, eventually postponed.

Heysham.—A few small houses have been erected, but there is still a great demand for cottage property. In many cases householders whose work is in Heysham are obliged to dwell in other neighbourhoods, because they cannot get houses suitable for their requirements.

Hindley.—There is much overcrowding. The scarcity of houses is given as the reason for not carrying into effect the Closing Orders already made. Scheme for erection of 34 artisan's dwellings by Council held in abeyance.

Leigh (B.).—The Corporation has already erected 100 cottage houses on the lines of a modest town planning scheme. They also propose at a later date to erect 200 more houses for the working-class population. In carrying out the Housing and Town Planning Act, it has been the endeavour, wherever possible, to allow reconstruction, alterations, and improvements to be made to property in preference to asking for a Demolition Order following a Closing Order.

Little Lever.—In regard to the shortage of houses of the three-bedroom type mentioned in last year's report, the District Council has prepared plans and estimates for the erection of 30 houses for working classes, each with three bedrooms, but, owing to the war, the scheme has been postponed for six months.

Middleton (B.).—The Town Council has undertaken the erection of 24 houses on the Boarshaw estate, and building operations have been commenced. It is proposed to erect 8 houses with 6 rooms and bath, and 16 houses with 5 rooms and bath.

Newton-in-Makerfield.—Council's housing scheme, permission for which was granted in previous year, deferred on account of the war.

Norden.—The Medical Officer of Health is of opinion that the good health of the district is due to the houses not being crowded closely together, but this asset will be lost if house building is allowed to progress without any rules being laid down as to the number of houses to be erected per acre, and proper provision made for open spaces. These objects can only be obtained by a town planning scheme.



Ormskirk.—Owing to high prices of building material and the great scarcity of labour, the Council are unanimous in considering that this is an inopportune time for the erection of workmen's dwellings, and have decided not to proceed with such work until matters assume a normal condition.

Prescot.—The Council are building 12 cottages on the Moss, adjoining the 38 they have already built there. A Local Government Inquiry held during the year, and sanction for loan obtained.

Radcliffe.—The need for new houses in Stand Lane Ward is a very urgent one. During the last four years 80 houses have been closed and only 29 new houses completed and certified fit for habitation, a large proportion of which have a rental of over £16. The Medical Officer of Health hopes that there will be no further delay in carrying out the Council's scheme for which plans and specifications have already been prepared.

Rainford.—Deficiency of cottages with three bedrooms ; Council erecting 14 houses as first instalment. The Medical Officer of Health remarks that, as soon as these cottages are completed, it will be possible to deal with gross overcrowding which at present exists.

Westhoughton.—The Council have had under consideration a housing scheme, but owing to the present difficulties, it was thought advisable to postpone the same.

Whitefield.—The Council's scheme for the erection of 58 artisans' dwellings—sanction for which obtained from Local Government Board and tenders obtained—has, owing to the present crisis, been postponed until a more favourable opportunity presents itself.

**Canal Boats.** — Under the Canal Boats Acts and the regulations made thereunder, 1,137 boats were examined in 26 districts, and 129 did not comply with the requirements.

Last year the inspections numbered 946, and the infringements 144. Examination of boats was most numerous in Abram 60 (6 infringements), Eccles (B.) 102 (30), Ince-in-Makerfield 50 (11), Leigh (B.) 68 (15), Littleborough 49 (7), Little Lever 49 (8), Middleton (B.) 45 (4), Radcliffe 152 (5), Widnes (B.) 50 (5), Worsley 51 (9), Leigh (R.) 137 (3), and West Lancashire (R.) 64 (11).

**Slaughter-houses.**—The majority of Medical Officers of Health state that slaughter-houses are fairly well kept, but it is again reported that, in a large number of instances, these premises are structurally defective, and in too close proximity to dwelling-houses. Their scattered situation and the irregular hours of slaughtering render efficient inspection of meat practically an impossibility. Reference is made in the reports of Bacup (B.), Billinge, Dalton-in-Furness, Haslingden (B.), Heywood (B.), Hindley, Leigh (B.), Milnrow, and Nelson (B.), to the unsatisfactory conditions existing.

PUBLIC ABATTOIRS have been provided at Accrington (B.), Chorley (B.), Clitheroe (B.), Colne (B.), Darwen (B.), Fleetwood, Great Harwood, Lancaster (B.), Lytham, Newton-in-Makerfield, Oswaldtwistle, and St. Annes-on-the-Sea. At Nelson (B.) a scheme for the erection of public abattoirs has been laid before the Local Government Board, but is deferred. The Medical Officers of Health of Bacup (B.), Church, Haslingden (B.), Heywood (B.), Hindley, Morecambe (B.), and Swinton and Pendlebury advocate such provision. Where abattoirs have been established, regular visitation at the time of slaughtering is possible, and proper supervision of the meat supply can take place; these facts alone should encourage Local Authorities, wherever possible, to abolish private slaughter-houses and provide a central abattoir. In rural areas inspection of meat is exceptionally difficult, especially as the practice still continues of slaughtering on farm premises.

**Food Inspection.** — The vigilance exercised over the food supply of the County is indicated, to a certain extent, by the amount of unsound or diseased food seized and destroyed, viz. :—

25 carcasses of cows, 19 sheep, 6 pigs.

Carcasses or parts of carcasses condemned for tuberculosis 290.

Beef 16,262 lbs., mutton 234 lbs., pork 1,143 lbs.

Fish 1,452 lbs., fruit 4,695 lbs., vegetables 2,918 lbs., &c.

In several instances legal proceedings were instituted for selling, or exposing for sale, food unfit for human consumption: Ashton-under-Lyne (B.), £2 and costs on two counts with £2 2s. advocate's fee; Church, £5 and costs; Denton, 5s. 6d. and costs in three cases; Eccles (B.), £3 and costs; Haslingden (B.), £3 and costs; Kearsley, £10 and costs; Whitefield, £20 and £10 costs; Chorley (R.), £20 and costs, &c.

**FOOD POISONING.**—In July, 1914, a serious outbreak of bacterial food poisoning occurred, affecting over three hundred persons in the Urban District of Withnell and the Borough and Rural District of Chorley; two deaths resulted. Milk was found to be the only food common to all the sufferers. From the investigations made, and from bacteriological examinations carried out, it appeared conclusive that the outbreak was caused by the consumption of milk from a certain farm. This outbreak gives emphasis to the necessity of the greatest care being taken by persons engaged in the production of milk, to secure, not only absolute cleanliness, but also to see that milch cows are free from the least suspicion of disease. When a cow shows symptoms of ill-health, the milk should be kept apart from the general supply and not sold to the public, and bearing in mind the possibility of cows under certain conditions possessing infective qualities transmissible to human beings by milk, no delay should take place in obtaining veterinary advice.



Investigations into outbreaks of bacterial food poisoning which occur from time to time reveal the fact that unsatisfactory conditions very often exist on and around premises in which food is prepared for sale for human consumption, and also draw attention to the inadequacy of the legal powers possessed by Local Sanitary Authorities for dealing with such premises. Arising out of an outbreak of this character in June, 1915, the Public Health Committee of the County Council urged upon the Local Government Board the necessity of giving public bodies powers over such premises, and suggested that all places used for the preparation for sale of meat and other food stuffs intended for human consumption should be licensed and required to comply with specified bye-laws or regulations.

**PUBLIC HEALTH (SHELL-FISH) REGULATIONS, 1915.**—Numerous representations have from time to time been made by Local Authorities to the Local Government Board that further powers were required to prevent danger to health from the consumption of shell-fish which have been grown or fattened in polluted waters, and it is now generally admitted that cases of enteric fever and other illness have been caused by the consumption of shell-fish which had been exposed to sewage contamination.

On the 1st March, 1915, important Regulations made by the Local Government Board became operative prohibiting the sale of shell-fish likely to cause danger to public health.

The new Regulations provide machinery for the closing of shell-fish layings in regard to which there is evidence to show that shell-fish from such layings have actually caused infectious or other disease, or are likely to be a source of danger to public health. The power to close layings is vested by the Order in the Sanitary Authority of the district in which the layings are situated, and a right of appeal to the Board under certain circumstances is provided for.

The Sanitary Authority of the district in which the layings are situated is required to take action on receipt of a representation from another Local Authority, in whose district the shell-fish are consumed, indicating that the shell-fish have caused or are likely to cause infectious or other disease, or, on the report of their own Medical Officer of Health, if such shell-fish are found in their own district.

Apart from any representation from another district, the Medical Officer of Health of every district in which shell-fish are laid should examine the conditions of the layings in his district and should report to the Local Authority any cases in which the layings are so situated as to be liable to dangerous contamination, with a view to steps being taken under the Regulations to prevent shell-fish being distributed for sale for human consumption from such layings unless the shell-fish have been relaid in fresh-water for a period sufficient to free them from contamination. The Local Government Board are advised that, as a general rule, the period of relaying required to rid shell-fish of micro-organisms should not be less than a fortnight.

The Board consider it of great importance that any action taken with a view to the closing of a laying should be based rather on epidemiological and topographical considerations than on the results of bacteriological analysis.

**Lodging-houses** are reported as fairly well conducted.

**Sanitary Condition of Schools.**—School buildings are generally reported as “good” or “fair,” but the sanitary conveniences and the state of the playgrounds are often unsatisfactory. The lavatory accommodation in many cases is meagre, and ventilation of school rooms does not receive the attention its importance warrants.

**Dairies, Cowsheds, and Milkshops.**—With the exception of the small district of Little Crosby, Regulations under

the Dairies, Cowsheds, and Milkshops Order, 1885. are in force in all the urban and rural districts in the Administrative County.

From information collected from the district reports there are, approximately 6,336 cowkeepers in the County area, of whom 5,560 are registered ; in addition, dairymen or purveyors of milk number 1,789, of whom 1,743 are registered.

The following Authorities have made arrangements for the inspection of cattle by a veterinary surgeon :—Accrington (B.), Ashton-under-Lyne (B.), Audenshaw, Chadderton, Colne (B.), Eccles (B.), Heywood (B.), Lancaster (B.), Morecambe (B.), Nelson (B.), Rawtenstall (B.), Royton, St. Annes-on-the-Sea, Trawden, Urmston, and Whitefield.

The district reports usually contain some reference to the condition of dairies and cowsheds, but, in many instances, the information given is meagre. The importance of an abundant air space in cowsheds, efficient means of lighting, and adequate ventilation, is better appreciated than formerly, but there are still a large number of cowsheds in the County with many structural defects, pervious floors, insufficient drainage, inadequate means of lighting and ventilation, and often large accumulations of manure are allowed in close proximity to the shippens. The recent inspection of farms in certain areas by the County Sanitary Inspectors has revealed conditions which are most unsatisfactory, and Local Authorities are urged, in the interests of the public health, to insist upon the requirements of the regulations in force being adhered to.

There is also need for the exercise of much greater care on the part of retailers of milk in shops ; the vessels containing the milk should be kept in a suitable place, and covered to prevent the access of flies and the deposit of dust.



The Milk and Dairies Act, 1914, was intended to become operative on the 1st January, 1915, but by Order of the Local Government Board its operation was deferred until the 1st of October, and by Act of Parliament, 2nd July, 1915, it was further postponed until such date, not being later than the expiration of one year after the termination of the present war, as the Local Government Board may by order appoint.

The following notes respecting dairies and cowsheds are extracted from district health reports :—

Abram.—‘There are still plenty of opportunities for improved cleanliness, both in the cattle and the attendants.

Dalton-in-Furness.—Many cowsheds are so defective “that nothing short of reconstruction would place them in a condition to fulfil modern requirements.”

Heywood (B.).—At some farms the manure is kept too close to the farm buildings, and in too large quantities ; these accumulations encourage the growth of flies, &c., which readily contaminate the milk.

Lancaster (B.).—One of the least desirable features of the milk trade, as at present conducted, is the frequency with which milk is exposed to the risk of contamination through being stored and sold in the shops of general dealers.

Middleton (B.).—There is considerable improvement in the cleanliness of cowsheds, but the majority of the farmers continue to hold the theory that close stuffy shippons are conducive to health in the cattle, and an advantage as regards the quantity of milk to be obtained from them.

Padiham.—The method of handling milk is, in some cases, very unclean and insanitary. Year after year I have written on this subject, says Dr. Dharmavir, and have come to the conclusion that the most desirable method of eradicating this evil is the gradual education of farmers in the art of cleanly milking and the cleanly distribution of milk.

**BACTERIOLOGICAL EXAMINATION OF MILK.**—Twelve Medical Officers of Health report that 123 samples of milk were submitted for bacteriological examination. At Leigh (B.) all the samples submitted (5) shewed the presence of dirt ; one sample at Nelson (B.) contained pus ; at Middleton (B.), Swinton and Pendlebury, Waterloo-with-Seaforth, and Whitefield, samples were found to contain tubercle bacilli. Samples from Ashton-under-Lyne (B.), Lancaster (B.), Lytham, Morecambe (B.), St. Annes-on-the-Sea, and West Lancashire (R.) gave negative results.

**Factories and Workshops**—The information tabulated below respecting the duties carried out by Local Authorities under the Factory, &c., Act, is obtained from district reports :—

	FACTORY INSPECTION.						Total No. of Work- shops on Register.
	No. of Inspec- tions.	No. of Written Notices.	No. of Prosecu- tions.	No. of Defects.			
				Found.	Remedied.	Referred to H.M. Inspector of Factories.	
Administrative County.....	16955	554	..	1353	1287	8	9051
Urban Districts	15416	496	..	1264	1205	7	8173
Rural Districts.	1539	58	..	89	82	1	878

**Bakehouses.**—In the majority of reports, bakehouses are described as “good” or “fair.” There are 91 under-ground bakehouses still in use.

**Smoke Observations.**—During the year 1914, smoke observations numbered 2,857, against 3,036 last year, action being taken in 74 districts, as compared with 82 districts in 1913. Legal proceedings were instituted in 36 instances. Apparently in many districts the work of smoke prevention is not attempted.

DISTRICT.	No. of Smoke Observa- tions.	Time limit per hour— Minutes.	No. of Legal Pro- ceedings.	Result of Legal Proceedings or Remarks.
Accrington (B.).....	11	3 to 7*	..	Ordered to abate and pay costs.
Adlington .....	15	6	..	
Ashton-under-Lyne (B.)...	136	4	4	
Atherton .....	14	5	..	
Audenshaw.....	3	4	..	£1 and costs.
Bacup (B.) .....	29	10	..	
Barrowford.....	11	10	..	
Bispham-with-Norbreck...	7	8	..	
Blackrod .....	7	..	..	
Chadderton .....	36	4 to 8*	1	
Chorley (B.) .....	30	8	..	
Church .....	8	8	..	
Clayton-le-Moors .....	20	10	..	
Clitheroe (B.) .....	49	..	..	
Colne (B.) .....	323	5 to 10*	..	One 10s. and costs, 1 fined 5s. and costs, 1 costs only, 1 order to abate, 1 dismissed.
Crompton .....	12	6 to 10*	..	
Darwen (B.) .....	167	5 to 7*	5	
Droylsden .....	331	..	..	
Eccles (B.) .....	38	4	2	Owners' attention drawn to excessive emissions. One fined 10s. and costs; 1 to pay costs.
Failsworth .....	24	4 to 8*	..	Conviction in each case. Total fines, £7 15s.
Farnworth .....	12	7½	..	
Fleetwood.....	14	6	..	
Formby.....	3	..	..	
Fulwood .....	9	3	..	
Golborne.....	22	12	..	
Great Crosby .....	50	..	..	
Great Harwood .....	16	10	..	
Haslingden (B.).....	15	10	..	
Heywood (B.) .....	115	6	5	
Horwich .....	21	10	..	
Hurst .....	96	8	..	
Huyton-with-Roby .....	12	3	..	
Irlam .....	9	6	..	
Kearsley .....	18	7½	2	In one case order to abate, 1 fine in- flicted for non-com- pliance with order.
Kirkham.....	16	6	..	Order to abate. Order granted to abate within 3 months.
Lees .....	6	4 to 8*	..	
Leigh (B.).....	97	8	..	
Litherland .....	23	6	1	
Littleborough.....	54	6	1	Conviction in each case. Total fines £10 0s. 6d.
Little Hulton .....	4	10	..	
Little Lever .....	7	10	..	
Lytham .....	1	..	..	
Middleton (B.) .....	146	10	12	



DISTRICT.	No. of Smoke Observa- tions.	Time limit per hour— Minutes.	No. of Legal Pro- ceedings.	Result of Legal Proceedings or Remarks.
Milnrow .....	6	6	..	
Mossley (B.) .....	5	10	..	
Nelson (B.) .....	44	10	..	
Newton-in-Makerfield .....	18	..	..	
Norden .....	17	5	..	
Ormskirk .....	10	..	..	
Padiham .....	52	10	..	
Preesall .....	4	6	..	
Prestwich .....	11	5	..	
Radcliffe .....	88	7	..	
Ramsbottom .....	39	12	..	
Rawtenstall (B.) .....	17	8	..	
Rishton .....	Several	..	..	
Royton .....	25	6 to 10*	..	
St. Annes-on-the-Sea .....	35	2½ consecutive minutes	..	
Stretford .....	131	4	2	10s. and costs in each case.
Swinton and Pendlebury ..	74	5	..	
Thornton .....	Several	..	..	
Tottington .....	5	12	..	
Turton .....	74	12	..	
Tyldesley-with-Shakerley ..	22	8	1	Order for abatement, with costs.
Wardle .....	2	8	..	
Waterloo-with-Seaforth ..	6	4	..	
Westhoughton .....	27	9	..	
Whitefield .....	36	10	..	
Whitworth .....	2	..	..	
Withnell .....	6	3	..	
Worsley .....	16	7	..	
Barton-upon-Irwell (R.) ..	29	..	..	
Blackburn (R.) .....	11	..	..	
Bury (R.) .....	8	..	..	
Administrative County ...	2857	..	36	

\*According to number of boilers.

**Scavenging and Refuse Removal.** — Each of the appended summaries contains a brief reference to the method of scavenging adopted. In 115 districts it is reported this work is carried out in a “satisfactory” manner; in the following eight districts it is described as “fair,” “moderate,” or “not satisfactory” :—Ashton-in-Makerfield (fair), Ince-in-Makerfield (only moderate), Little Hulton (fair), Tottington (unsatisfactory in one ward where the work is undertaken by contract), Clitheroe (R.) (moderate), Lancaster (R.) (in

certain villages, left to occupiers, and unsatisfactory), Leigh (R.) (unsatisfactory—carried out by tenants and farmers), and Wigan (R.) (not entirely satisfactory). Ninety District Councils themselves are responsible for the carrying out of the work, in 9 districts contractors undertake the task, in 10 districts it is performed jointly by the Authority and by contract, and in the remaining 14 districts—mainly rural areas—householders are left to make the best arrangements they can for refuse removal.

The contract system of scavenging and refuse removal is again condemned by several Medical Officers of Health, Dr. Trimble, Walton-le-Dale, stating that there can be no comparison between the carrying out of the cleansing operations when performed under proper supervision by a Local Authority, and the work when undertaken by tender. He urges his Council to control this work in all parts of his district, and expresses the opinion that by so doing cleanliness and efficiency will benefit.

The reports again contain evidence of the serious nuisance caused by the emptying of the contents of privy middens on to streets, back yards, and back passages, often on to unpaved surfaces which cannot be properly cleansed. Uncovered carts used for the removal of house refuse are also a source of nuisance, in so much that they allow dust, waste paper, &c., to be blown about the streets. In some districts the method of refuse removal adopted or permitted by the Council is a contravention of their own bye-laws.

REFUSE DESTRUCTORS.—In the following 28 districts destructors have been provided :—The boroughs of Accrington, Ashton-under-Lyne, Chorley, Colne, Darwen, Eccles, Haslingden, Heywood, Lancaster, Leigh, Middleton, Morecambe, Nelson, and Rawtenstall, and in the urban districts of Atherton, Chadderton, Droylsden, Farnworth, Fleetwood, Lytham, Ormskirk, Padiham, Radcliffe, Ramsbottom,

Royton, St. Annes-on-the-Sea, Stretford, and Swinton and Pendlebury. At Crompton and Widnes (B.) destructors are in course of erection; at Failsworth and Oswaldtwistle sites have been acquired on which to erect such appliances, and at Westhoughton a scheme for disposing of refuse by means of a pulverising plant has been submitted to the Local Government Board. The Medical Officers of Health of the following districts advocate the provision of destructors:—Ashton-in-Makerfield, Bacup (B.), Clitheroe (B.), Denton, Great Crosby, Great Harwood, Hindley, Littleborough, Newton-in-Makerfield, Norden, Prestwich, Rishton, and Tyldesley-with-Shakerley.

**House Drainage, Sewerage, and Sewage Disposal.**—Following the usual custom, a brief description is given in each summary appended of the method of sewage disposal in operation, the information in many instances being taken from the last issued reports of the Chief Inspectors of the Mersey and Irwell, and Ribble Watershed Committees.

In the area under the control of the Mersey and Irwell Watershed Committee, extensions of outfall works, improvements, or alterations thereto, are reported as completed or in progress at Ashton-under-Lyne (B.) (scheme of extensions submitted to Local Government Board), Denton (mechanical plant superseded lagooning process of dealing with sludge), Eccles (B.) (extensions carried out), Hindley (enlargement of Platt Bridge works now in hand), Ince-in-Makerfield (scheme for new works approved but sanction to loan withheld at present), Little Hulton (new works being provided at Peel Lane), Radcliffe (two bacteria beds constructed), Ramsbottom (extensions completed), Tottington (contract let for Greenmount and Hawkshaw sewage scheme), Turton (Eagley works being enlarged), Whitefield (reconstruction scheme, Park Lane works, in hand), &c. At Barton-upon-Irwell (R.), Bury (R.), and other places, reconstruction or extension schemes in abeyance owing to the war.



Sewers have been extended at Abram (Platt Bridge), Denton (Thornley Lane), Middleton (B.), Mossley (B.), Prestwich, Radcliffe, Royton, Tyldesley-with-Shakerley, West-houghton (Hulton Lane), &c. At Swinton and Pendlebury sanction has been obtained to an extensive reconstruction scheme, estimated to cost £10,000.

In the area under the jurisdiction of the Ribble Watershed Committee, sewage works have been enlarged or improved at Barrowford, Chorley (B.) (Cowling works), Clayton-le-Moors and Great Harwood joint works (sanction obtained to loan of £14,800), Clitheroe (B.), Oswaldtwistle (new outfall works at Belthorn), Skelmersdale (new sewage scheme before Local Government Board), Burnley (R.) (application for loan of £1,200 for improvement of Huncoat works), Clitheroe (R.) (new works at Barrow completed), Preston (R.) (improvements to Penwortham sewage works), &c.

Extension of sewers are reported at Accrington (B.) (Green Haworth district), Chorley (B.), Church (Dill Hall Lane district), Clitheroe (B.) (Low Moor area), Nelson (B.), Standish-with-Langtree, Upholland, Walton-le-Dale (Walton Green main outfall sewer reconstructed), &c.

At Chorley (R.) several of the outfall works are too small to meet the growing requirements; Fylde (R.), Wrea Green outfall works reported as unsatisfactory. The condition of the River Yarrow at Croston is again complained of.

In the portion of the Administrative County outside the two Watershed areas, the following action has been taken during the year:—Ashton-in-Makerfield (new outfall works recently opened), Dalton-in-Furness (plans prepared and land purchased for extensions at Newton outfall works), Haydock (scheme for Haydock Lodge Asylum being carried out). At Newton-in-Makerfield, sewage scheme in abeyance. Sewers have been extended at Dalton-in-Furness,

Haydock, Huyton-with-Roby, Ulverston, Garstang (R.), Lancaster (R.), &c. At Lunesdale (R.) and Ulverston (R.) schemes for sewerage works in certain villages in hand.

At Preesall it is once again reported that works for relieving the condition of a portion of Preesall Village are “urgently necessary.”

**DRAIN TESTING AND FLUSHING, &c.**—Reference to systematic drain testing is contained in many reports; in one district 62 per cent. of the drains of old property tested were defective; in another area 48 per cent. defective, and also 45 per cent. of the drains to new property. Flushing is regularly carried out in a large number of districts. At Walton-le-Dale, sewer ventilating shafts have been fixed, and more efficient ventilation of sewers is advocated at Middleton (B.), Rawtenstall (B.), &c.

**Water Supply.**—The source and character of the water supply to each urban and rural district are referred to in the summaries. The majority of the populous areas in the County are well provided with wholesome water, on the constant system. Certain rural areas and outlying parts of urban districts are still inadequately supplied, or have to rely on water of a doubtful character.

The extracts below refer to unsatisfactory supplies:—

**Ramsbottom.**—Over 300 farms and isolated buildings supplied by wells and springs mostly of satisfactory quality, but not by any means all free from the risk of dangerous contamination.

**Tottington.**—Affetside portion of district depends on wells, the water from which found, on analysis, to be unsatisfactory.

**Burnley (R.).**—Supply to Reed needs improvement. No proper supply at Goldshaw Booth and Roughlee Booth.

**Chorley (R.).**—Supply to Mawdesley “doubtful.”

Clitheroe (R.).—Several farms and small hamlets dependent on insufficient and possibly contaminated wells or open streams.

Fylde (R.).—Insufficient supply at Wharles and part of Treales.

Lancaster (R.).—Over one-half the houses rely on wells, springs, streams, rain cisterns, &c. Some of the private supplies are “bad.” Cockerham and Silverdale still without public supply. Glasson Dock has to rely on water from the canal basin.

Lunesdale (R.).—Unsatisfactory supply in parts of Roeburndale; shortage during summer at Melling.

Ulverston (R.).—Village of Leece and hamlet of Dendron urgently in need of a reliable supply.

Whiston (R.).—Certain wells liable to contamination.

Prestwich, Radcliffe, &c.—Complaints as to turbidity of water supplied by Bury and District Water Board.

At Littleborough one private supply was condemned, as the water contained a dangerous quantity of lead, and at Bacup (B.) the use of a private supply was discontinued after the occurrence of several cases of plumbism. At Norden and Royton steps were taken to counteract the tendency of the water to act on lead pipes.

Developments in connection with the water supply are reported from Billinge, Blackrod, Dalton-in-Furness, Grange-over-Sands, Lathom and Burscough, Oswaldtwistle, Upholland, Walton-le-Dale, Westhoughton, Burnley (R.), Ulverston (R.), West Lancashire (R.), Wigan (R.), &c. Garstang (R.).—A report of the Joint Water Committee on the scheme of the Fylde Water Board for supplying Pilling, Winmarleigh, and Cockerham (Lancaster, R.) was presented in December, 1914. Preston (R.).—Arrangements made with Fylde Water Board for supply of water to Woodplumpton, Lea, and Cottam, upon completion of new water mains.



**Shops Acts, 1912 and 1913.** — Ten applications were received during the year for Orders under the Act of 1912, the forms of Order desired being shown below :—

Applications for Orders fixing day of weekly half-				
	holiday ...	...	...	4
„	„	exempting certain classes		
		of shops from weekly		
		half-holiday ...	...	2
„	„	exempting shops in holiday		
		resorts from weekly		
		half-holiday for certain		
		seasons of year ...		2
„	„	fixing day of weekly half-		
		holiday ...	...	1
„		Revision of Order made under		
		1904 Act ...	...	1
				—
				10
				==

In each instance the necessary statutory enquiries were made by Mr. J. E. Gee of the County Public Health Department, who holds the appointment of County Inspector, and detailed reports on the applications were presented to the Public Health and Housing Committee. For the purpose of routine inspection, the various Police Superintendents (21), Police Inspectors (39), and Inspectors and Assistant Inspectors of Weights and Measures (40) hold appointments as Inspectors under the Shops Acts, the necessary supervision being exercised by these Officers in the course of their ordinary duties. Contraventions of the Acts or the Orders in force observed by these Officers are reported to the County Public Health Department.

**Midwives Act, 1902.**—The names of 49 midwives were added to the County Register during the year 1914, and 59 names were removed for reasons specified below :—Three midwives (J.C., E.S., M.M.) were removed from the Roll at the instigation of the County Midwives Act Committee for

negligence or misconduct ; 2 (M.A., M.A.G.) were struck off for offences committed in County Boroughs ; 2 voluntarily surrendered their Certificates ; 5 permanently ceased to practice ; 27 removed to districts outside the County area, and 20 died. These changes left on the County Register on the 31st day of December, 1914, 932 midwives, with qualifications as under :—

Obstetrical Society of London	...	...	...	62
Coombe Lying-in Hospital and Guinness' Dispensary, Dublin	...	...	...	3
Rotunda Hospital, Dublin	...	...	...	1
Liverpool Ladies' Charity and Lying-in Hospital				36
St. Mary's Hospitals, Manchester	...	...		53
Glasgow Maternity Hospital	...	...	...	1
Cork Lying-in-Hospital, Cork	...	...	...	1
National Maternity Hospital, Dublin	...	...		1
Certificate (by Examination) of Central Midwives Board	...	...	...	223
In <i>bonâ fide</i> practice, July, 1901...	...	...	...	530
Under Rule B (2), 1910	...	...	...	21
Total	...	...	...	<u>932</u>

Of this number 771 were practising as midwives at the end of the year, the remaining 161 having given notice during the year that they had temporarily ceased to practise, but some of these may recommence at any time.

There is a gradual diminution in the number of *bonâ fide* or untrained midwives, the number of this class on the County Register having fallen from 880 in 1905 to 530 at the end of the year under report.

In the month of January, 1915, in compliance with Section 8 (5) of the Act, the Central Midwives Board were supplied with a list of the names and addresses of all midwives

who, during the year 1914, had notified the Local Supervising Authority (*i.e.*, the County Council) of their intention to practise in the Administrative County area.

A current copy of the Roll of Midwives, as required by Section 8 (5), is kept at the County Offices (Public Health Department), “accessible at all reasonable times for public inspection.”

Changes of name and address, &c.—As required by the Act, the Central Midwives Board is acquainted of all changes of name or address, and deaths of midwives, so that the necessary alterations may be made in the Official Roll. The following are the notifications in 1914:—Changes of address 128, changes of name 6, deaths 20.

MEDICAL HELP RECORDS, &c.—The following table shows the number of notifications received from midwives under the Rules of the Central Midwives Board, Section E, during the year 1914, and the four preceding years:—

	1914.	1913.	1912.	1911.	1910.
Records of sending for medical help .....	2612	2419	2226	2068	1808
Still-births ..... M. 293 F. 205 Not differentiated ..	498	222 218 .. } 440	246 210 .. } 456	281 233 .. } 514	289 254 1 } 544
Deaths of mother or child before the attendance of a medical practitioner ..... Mother Child	7 52 } 59	2 56 } 58	8 48 } 56	3 42 } 45	3 47 } 50

The gradual increase in the number of medical help records may be regarded as very satisfactory, as it indicates that the midwives realise more fully the importance of advising that medical assistance be obtained in cases which present difficulties or abnormal features.



The following table analyses the causes for which medical assistance was obtained in the year 1914:—

	Quarter ended.				Year 1914.
	Mar. 31.	June 30.	Sep. 30.	Dec. 31.	
<i>Pregnancy.</i>					
Abortions, miscarriages .....	21	24	23	23	91
Deformed pelvis.....	5	3	5	1	14
Loss of blood .....	1	..	1	3	5
Other abnormalities or complications ..	..	..	1	2	3
<i>Labour.</i>					
Unusual presentations.....	65	64	56	52	237
Ante-partum hæmorrhage .....	11	8	10	11	40
Post-partum hæmorrhage .....	16	11	14	11	52
Retained placenta or membranes.....	14	16	18	11	59
Adherent placenta.....	12	14	12	11	49
Ruptured perinæum .....	92	93	83	96	364
Obstructed labour, uterine inertia, or requiring instrumental assistance ..	169	204	210	181	764
Convulsions .....	2	3	6	1	12
Premature labour .....	21	23	33	35	112
Other complications .....	9	12	15	4	40
<i>Lying-in.</i>					
Abdominal swellings.....	1	..	..	..	1
Offensive lochia .....	..	..	1	..	1
Rigor .....	..	2	1	..	3
Rise of temperature above 100·4° F.....	33	33	30	26	122
Unusual swelling of breasts .....	..	1	..	..	1
Secondary post-partum hæmorrhage ....	1	1	..	..	2
White leg .....	1	2	..	1	4
Unsatisfactory progress or other com- plications .....	31	35	27	45	138
<i>Newly Born Child.</i>					
Injuries received during birth .....	1	1	..	..	2
Malformations or deformities .....	8	6	13	10	37
Dangerous feebleness .....	35	30	30	50	145
Inflammation of eyes or eyelids .....	53	67	57	45	222
Serious skin eruptions .....	..	..	1	..	1
Inflammation about the umbilicus .....	..	..	..	..	..
Other complications .....	23	28	15	25	91
Total.....	625	681	662	644	2612

The most noticeable feature of the above classification is the marked increase, as compared with the year 1913, in the number of occasions on which midwives advised medical help in cases of inflammation of babies' eyes, 222 as compared with 107, and in case of rise of temperature, 122 against 97. From this it may be inferred that the action taken from time

to time to impress upon the midwives the importance of calling in medical aid in these cases has had a beneficial effect.

**BIRTHS ATTENDED BY MIDWIVES.**—Information has been obtained from every midwife on the Register respecting the number of births attended during 1914 in the County area, and it appears that of the 771 midwives who gave notice of their intention to practice, 668 acted in the capacity of midwife at 21,880 births, this number representing 56 per cent. of the total births registered in the Administrative County, exactly the same percentage as in the previous year. Births attended by midwives acting as monthly nurses under the supervision of medical practitioners are not included in the number above given.

In 1914, 34 midwives attended over 100 cases.

39	„	between 75 and 100 cases
85	„	„ 50 „ 75 „
132	„	„ 25 „ 50 „
123	„	„ 10 „ 25 „
73	„	„ 5 „ 10 „
77	„	less than 5 cases.

These figures do not include the number of births attended by midwives residing and practising in County Boroughs who occasionally take cases in the County area.

**PUERPERAL FEVER.**—The total number of cases of puerperal fever reported in connection with the administration of the Midwives Act during 1914 was 145, and of these 52 had a fatal termination, one other death being registered of a case notified at the end of the previous year, making a total of 53 deaths. In 1913 the cases notified numbered 105, and the deaths 46; in 1912, 126 cases 45 deaths, and 119 cases 45 deaths in 1911. These figures differ slightly from the total cases and deaths ascertained from the quarterly and annual reports of Medical Officers of Health, the difference in deaths

being usually due to the system of transferable deaths in vogue. The attack rate of puerperal fever in 1914 per 1,000 registered births was 3·76, and the case mortality 36·30 per cent., against corresponding averages in 1913 of 2·83 and 41·81. In 1912 these rates were 3·30 and 35·43 respectively. Seventy-seven of the cases of puerperal fever occurring in 1914 were amongst women attended at child-birth solely by certified midwives, and 29 died, or 37·66 per cent.; 29 cases with 14 deaths—mortality 48·26 per cent.—occurred where midwives were acting as nurses under the supervision of medical practitioners, and in the remaining 39 cases with 10 deaths (including 1 death of a case notified in 1913)—mortality 25 per cent.—no midwives were in attendance. Last year these percentages were respectively 43·47, 53·84, and 31·57.

As far as could be ascertained by careful investigation into each case of puerperal fever, there was no apparent common cause for the excess in the number of notifications, excepting that many of the attacks, especially in the early and middle part of the year, were of a very slight character, the temperature only remaining above normal for two or three days, and it is probable that cases of this type were not formerly made the subject of a notification under the Infectious Diseases Notification Act.

CHARGES OF NEGLIGENCE, MISCONDUCT, &c.—Arising out of the enquiries made into puerperal fever cases, 40 charges of negligence or misconduct were preferred against 38 midwives, and full details of the offences were reported to the Midwives Act Committee. In one instance the midwife (M.M.) was reported to the Central Midwives Board, who subsequently struck her name off the Roll; six midwives were severely censured by the Chairman of the Midwives Act Committee, and 31 were cautioned by letter.

Fifty midwives were reported to the Committee for offences in connection with cases of ophthalmia neonatorum; of these, 9 were severely censured, and 41 cautioned.



In addition, 14 midwives were charged with negligence or misconduct in other respects; 4 were reported to the Central Midwives Board, and 3 (including M.M. previously referred to, who was also charged with offences arising out of puerperal fever cases) were subsequently struck off the Roll; 1 midwife was severely censured, and 9 midwives were cautioned. A large number of minor offences were also dealt with by the Department, the midwives in most instances being cautioned either by letter or verbally by the Inspectors.

OPHTHALMIA NEONATORUM.—A very considerable amount of additional inspectorial and clerical work has been entailed by “The Public Health (Ophthalmia Neonatorum) Regulations, 1914,” which became operative on the 1st April, 1914. By these Regulations a medical practitioner is required, on becoming aware that a child under his care is suffering from ophthalmia neonatorum, to forthwith notify the case to the local Medical Officer of Health, and every certified midwife who has reasonable grounds for supposing that a child upon whom she is in attendance, or whom she is called to visit in the course of her practice, is suffering from ophthalmia neonatorum, shall, *unless the case has already been notified by a medical practitioner*, forthwith make and sign a notification of the case in the form set out in the schedule to the Regulations, and shall transmit the notification to the Medical Officer of Health of the district. By this means, and by copies of medical help records from midwives, 389 cases of ophthalmia neonatorum were reported to the County Public Health Department, and every case in which a certified midwife was concerned was carefully investigated. As previously stated, in 50 instances, midwives failed to observe the Rules in some respects.

ENQUIRIES INTO CAUSATION OF STILL-BIRTHS, ABORTIONS AND MISCARRIAGES.—An Inspector of the Local Government Board in 1914 visited several districts in the Administrative



TABLE D.

PARTICULARS AS TO EQUIPMENT AND EFFICIENCY OF MIDWIVES ON THE COUNTY REGISTER ON THE 31ST DECEMBER, 1914.

	MIDWIVES.			REQUIREMENTS.																	CONDITION AS TO CLEANLINESS.						EDUCATION.				ABILITY TO							
				Midwife provided with :—																																		
	Total No. on Register.	No. Practising.	No. not practising or without cases in 1914.	Washing Dresses and Aprons.		Bag of Appliances.			Forms.					Register of Cases.				Person.			Home.			Read Thermo-meter.		Take Pulse.		Pass Catheter.										
				Yes.	No.	Fully equipped.	Partially equipped.	Nil.	Well.	Moderate.	Bad.	Medical help.	Still Births.	Deaths.	Laying out the dead.	None.	Yes.	No.	Well.	Moderate.	Bad.	Not at all.	Clean.	Fair.	Dirty.	Clean.	Fair.	Dirty.	Good.	Fair.	Poor.	Illiterate.	Yes.	No.	Yes.	No.	Yes.	No.
Midwives residing in the Administrative County	755	568	192	563	...	499	64	...	466	95	2	563	560	559	35	...	563	...	480	78	5	...	490	71	2	492	64	7	326	60	43	134	538	25	413	150	327	236
Midwives residing in adjoining Counties and in County Boroughs, but practising in County Area	177	105	72	105	...	95	10	...	90	13	2	105	104	101	20	...	105	...	94	11	...	...	95	10	...	95	9	1	86	6	4	9	101	4	89	16	84	21
Total ...	932	668	264	668	...	594	74	...	556	108	4	668	664	660	55	...	668	...	574	89	5	...	585	81	2	587	73	8	412	66	47	143	639	29	502	166	411	257



County to enquire into the high infant mortality, and also as to the cause of still-births, abortions, and miscarriages. With a view to obtaining information on the latter points, forms of queries were forwarded to all the midwives residing and practising in the Administrative County. Enquiries were made as to the number of abortions, miscarriages, and still-births occurring in their practice during the last three years, and also as to their knowledge of the taking of drugs, or the use of articles, with the object of procuring abortion. Replies were received from 491 midwives; 402, who attended during the year 1913, 16,250 births, stated that they had no reason to suspect the taking of drugs, or the use of articles, by the patients they attended, with the object referred to. These midwives attended 147 cases of abortion, equal to a rate of 0·9 per 100 births attended, and 506 still-births, or a rate of 3·1 per 100 births. Sixty-six midwives, in whose practise 4,296 births took place in 1913, gave their views with respect to attempts made to procure miscarriage, and the details obtained were epitomised and forwarded to the Local Government Board. These women reported 62 abortions, or 1·4 per 100 births attended, and 184 still-births, equal to 4·2 per 100 births. The replies from the remaining 23 midwives gave no information.

Table D appended gives the usual details as to the equipment and efficiency of the midwives on the County Register at the end of the year.

OTHER MATTERS dealt with during the year included enquiries into 125 cases of rise of temperature or rigor; of these, 33 proved to be cases of puerperal fever, and immediate action was taken to suspend the midwife concerned from practice until disinfection of her clothing, bag, and person had been carried out. Ten abortions or miscarriages reported as "still-births" were also the subject of investigation. In a number of instances action was required on account of mid-

wives having been in contact—either at their own homes or at houses they were attending—with infectious disease, such as scarlet fever, diphtheria, &c.

**Sale of Food and Drugs Acts.**—By the Order of the Local Government Board prescribing the duties of a County Medical Officer of Health, he must include in his Annual Report a section on the administration of these Acts.

The following is the Report of the County Analyst (Mr. W. Collingwood Williams, B.Sc.) for the year 1914 :—

#### SALE OF FOOD AND DRUGS ACTS.

“ Five thousand and eighteen samples have been analysed during the year, of which 4,753 were submitted by the Superintendents of Police, 249 by Officers of Local Authorities, and 16 by other persons.

“ The number of samples submitted by the Police is 140 less, and by Officers of Local Authorities 28 less than in 1913.

“ Of the samples taken by the Police, 511 were adulterated or not up to standard, being 10·75 per cent. of the number taken, as compared with 8·68 per cent. in 1913.

“ Of the samples taken by Officers of Local Authorities and others, 21 were adulterated or not up to standard, being 8·0 per cent. of the number taken, as compared with 7·0 per cent. in 1913.

“ The percentage of adulterated samples varies from 3·7 per cent. in the Rochdale Division to 42·1 per cent. in the Seaforth Division, and the average percentage of adulterated samples over the whole County is 10·6 per cent.

“ The proportion of adulterated samples is higher than for some years past.



TABLE GIVING DETAILS OF THE SAMPLES TAKEN IN THE ADMINISTRATIVE COUNTY  
DURING 1914.

DIVISION.	Milk.		Butter.		Lard.		Coffee.		Spices and Condiments		Spirits.		Drugs.		Other Articles.		Totals.		Percentage of Adulterated Samples.
	*	†	*	†	*	†	*	†	*	†	*	†	*	†	*	†	*	†	
Lonsdale North ...	51	3	15	...	13	...	10	...	12	...	15	3	...	...	5	...	121	6	5.0
Lonsdale South ...	51	9	8	...	3	...	6	...	9	...	1	...	...	...	19	1	97	10	10.0
Garstang .....	71	4	4	...	6	...	...	...	1	...	36	7	...	...	2	...	120	11	9.1
Kirkham .....	36	5	22	...	3	...	16	...	21	1	54	3	...	...	16	2	168	11	6.5
Blackburn Lower	99	11	13	...	4	...	13	...	12	...	14	1	19	5	34	...	208	17	8.2
Blackburn Higher	167	16	29	...	28	1	19	...	19	1	60	6	...	...	13	1	335	25	7.4
Church .....	90	10	12	...	11	...	9	...	6	...	14	6	...	...	29	1	171	17	9.9
Rossendale .....	103	6	7	2	5	...	4	...	4	...	11	...	...	...	13	1	147	9	6.1
Leyland .....	149	12	34	...	17	...	10	...	27	5	12	3	1	...	41	4	291	24	8.2
Bolton .....	110	14	72	...	27	...	37	...	9	1	25	1	11	8	9	...	300	24	8.0
Bury .....	131	19	30	...	27	...	21	...	6	1	16	1	5	2	33	2	269	25	9.3
Rochdale .....	183	9	184	2	6	...	7	...	6	...	...	...	9	3	9	1	404	15	3.7
Ashton-under-Lyne	119	15	22	3	8	...	13	...	1	1	23	7	5	3	30	3	221	32	14.5
Manchester .....	230	39	50	2	27	...	33	...	73	6	35	3	33	8	79	3	560	61	10.9
Seaforth .....	248	110	4	...	...	...	3	3	3	...	...	...	16	6	13	2	287	121	42.1
Ormskirk .....	65	16	25	...	10	...	10	1	8	2	...	...	...	...	12	6	130	25	19.2
Prescot .....	57	3	11	...	2	...	1	...	1	...	4	...	...	...	17	1	93	4	4.3
Widnes .....	43	7	10	1	7	...	1	...	7	...	29	4	...	...	33	6	130	18	13.8
Warrington .....	226	21	33	...	17	...	31	...	26	1	...	...	...	...	16	...	349	22	6.3
Wigan .....	189	19	10	...	6	...	31	1	26	2	30	5	8	2	52	5	352	34	9.6
County Police .....	2418	348	595	10	227	1	275	5	277	21	379	50	107	37	475	39	4753	511	10.75
Local Authorities	157	12	20	...	9	...	8	1	22	2	...	...	4	...	29	1	249	16	8.0
Other Purchasers	7	3	...	...	...	...	...	...	...	...	...	...	...	...	9	2	16	5	
Totals ...	2582	363	615	10	236	1	283	6	299 (a)	23	379 (b)	50	111 (c)	37	513 (d)	42	5018	532	
Percentage of Adulteration	14.05		1.6		0.4		2.1		7.7		13.2		33.3		8.2		...		10.6

\* Samples. † Adulterated.

The 249 samples taken by Officers of Local Authorities include—Boroughs of Middleton 70, Morecambe 1, Nelson 23; Urban District Councils of Atherton 42, Newton-in-Makerfield 2, Stretford 93, and Westhoughton 18.

- (a) Pepper 191, Ginger 58, Vinegar 20, Mustard 20, Pickles 3, Pudding Spice 2; Ground Cinnamon 1, Sauce 4; *total* 299.
- (b) Whiskey 257, Rum 93, Gin 28, Brandy 1; *total* 379.
- (c) Castor Oil 5, Carbonate of Soda 1, Crushed Linseed 1, Glycerine 2, Flowers of Sulphur 1, Head Powder 2, Liquorice Powder 1, Potassium Acetate 2, Potassium Bicarbonate 4, Potassium Bromide 2, Potassium Citrate 2, Potassium Phosphate 1, Salt of Tartar 86, Seidlitz Powder 1; *total* 111.
- (d) Arrowroot 11, Baking Powder 12, Bread 4, Beer 17, Beef Suet 1, Barley 3, Boiled Mutton 1, Buttermilk 1, Cake Flour 2, Cheese 36, Coffee and Chicory 1, Cocoa 70, Cream 9, Cream of Tartar 12, Condensed Milk 5, Corn Flour 1, Flour 6, Ground Almonds 29, Honey 2, Jam 51, Jelly 4, Lobster Paste 3, Lemon Cheese 1, Margarine 102, Marmalade 4, Milk and Water 1, Oatmeal 7, Olive Oil 4, Potted Turkey and Tongue 1, Potted Ham and Tongue 2, Potted Meat 1, Potted Ham and Chicken 1, Potted Ham, Chicken, and Tongue 1, Potted Salmon and Shrimp 2, Potted Lobster 2, Potted Crab 1, Potted Shrimp 1, Port Wine 1, Rice 11, Sugar 18, Syrup 3, Sago 4, Shrimp Paste 2, Self-raising Flour 4, Sausages 1, Tapioca 5, Tartaric Acid 3, Tea 38, Tinned Salmon 2, Tinned Lobster 2, Treacle 2, Yeast 5; *total* 513.





“The increase is due to several causes acting independently :—

1.—“In drugs a large number of cases appear this year, due to the discovery of the widespread contamination of ‘salt of tartar’ with arsenic.

2.—“There is a distinct increase in the number of watered spirits.

3.—“Apart from the above factors, the more serious cases show a slight decrease, but there is still an increased number of slight cases, mainly occurring in milk, spices, and miscellaneous articles, of which latter a greater variety is now procured for analysis than in former years.

“The following tabular statement gives a summary of the various articles which have been found to be adulterated :—

Article.	Nature of Adulteration.	No. of Samples.
MILK ...	Added water (3 to 35%) ...	45
(2,582 samples analysed)	Deficient in cream (10 to 63%) ...	76
	Deficient in other ingredients	7
	Slightly deficient in fat ...	134
	Slightly deficient in non-fatty solids ...	113
	Formaldehyde ...	3
	—	378
	<i>Deduct</i> duplicate purchases..	2
	duplicate adulteration ..	13
	—	15
	—	363
BUTTER ...	Substitution of margarine ...	4
(615 samples analysed)	33% foreign fats ...	1
	Water in excess of 16% ...	3
	Salt in excess of 5% ...	4
	Sugar (about 1%) ...	2
	—	14
	<i>Deduct</i> duplicate purchases	2
	duplicate adulteration...	2
	—	4
	—	10

Article.	Nature of Adulteration.	No. of Samples.
CHEESE ... (36 samples)	Water in excess of 50% ...	1
MARGARINE ... (102 samples)	Water in excess of 16% ...	1
LARD ... (236 samples)	5% beef or mutton stearine.	1
COFFEE ... (283 samples)	Chicory (25-70%) ...	6
COCOA ... (70 samples)	Added starch and sugar ...	2
	Excess of husk (about 10%).	2
WHITE PEPPER .. (178 samples)	Excess of husk ...	1
	Small quantities of husk not exceeding 5% ...	16
		— 17
VINEGAR (20 samples)	Malt vinegar not wholly produced from malt extract	1
	Vinegar not wholly produced by fermentation ...	2
	Vinegar deficient in acetic acid ...	2
		— 5
	Deduct duplicate purchase	1
	duplicate adulteration ..	2
		— 3
GINGER ... (58 samples)		— 2
	About 2% calcium sulphate.	3
SPICE ... (2 samples)	About 3·0% sand ...	2
	Deduct duplicate purchase...	1
WHISKEY, RUM, AND GIN (378 samples)		— 1
	Excess of water beyond legal limits ...	50
SALT OF TARTAR (86 samples)	Contaminated with arsenic (0·2 to 14·5 grains per lb.) ...	56
	Deduct duplicate purchases...	20
		— 36



Article.	Nature of Adulteration.	No. of Samples.	
HEAD POWDERS (2 samples)	Containing about 6 grains of acetanilide in each ...	2	
	<i>Deduct</i> duplicate purchase....	1	
		—	1
GROUND ALMONDS (29 samples)	15% ground rice ... ..	1	
	10% ground rice and 10% earthnut ... ..	1	
	12% ground rice and a quantity of cashew nut ...	1	
		—	3
BEER ... ..	75 grains of salt per gallon.	1	
(17 samples)			
CREAM ... ..	Boracic acid not disclosed by label ... ..	2	
(9 samples)	Boracic acid in excess of that disclosed by label ...	1	
		—	3
JAM, MARMALADE, AND FRUIT JELLY (59 samples)	Apple pulp (15 to 25%) ...	4	
	Small quantities of apple pulp (1 to 2%)... ..	5	
	Benzoic acid (3.5 to 5.4 grains per pound) ...	4	
	Salicylic acid exceeding 1 grain per pound ...	5	
		—	18
	<i>Deduct</i> duplicate purchase....	1	
		—	17
POTTED MEAT AND FISH (17 samples)	Potted lobster, 45 grains boracic acid per pound.		
	Potted lobster, 49 grains boracic acid per pound.		
	Potted shrimps, 66 grains boracic acid per pound.		
	Potted lobster, 26 grains boracic acid and 26 grains benzoic acid per pound.		

Article.	Nature of Adulteration.	No. of Samples.
	Shrimp paste, 23 grains boracic acid and 20 grains benzoic acid per pound.	
	Potted crab, 7 grains boracic acid and 1·5 grains benzoic acid per pound.	
	Potted salmon and shrimp, 5 grains boracic acid and 1 grain benzoic acid per pound.	
	Potted salmon and shrimp, 3·3 grains boracic acid and 6·8 grains benzoic acid per pound.	
	Potted chicken, ham, and tongue, 15 grains boracic acid and 7 grains benzoic acid per pound.	9
RICE ... ..	0·36 and 0·18% talc ... ..	2
(11 samples)		
PEARL BARLEY ... ..	0·12% talc and faced with rice	1
(3 samples)		
Total ... ..		<u>532</u>

*Other Offences.*

MARGARINE ... ..	Not properly labelled ... ..	5
MILK ... ..	Refusal to sell, except from a can labelled "milk and water" ... ..	1
Total ... ..		<u>6</u>

*Milk.*

"Two thousand five hundred and eighty-two samples, or 51·4 per cent. of the total number taken, consisted of milk,

the number of adulterated or deficient samples being 363, or 14·05 per cent., against 13·5 per cent. in 1913.

“ The percentage of adulteration, as a whole, thus shows a slight increase, which, however, is mainly due to a greater number of slight deficiencies.

“ The more serious cases of watering are considerably fewer than last year, having fallen from 2·95 to 1·74 per cent.

“ The percentage of adulterated milks in the Administrative County is as usual materially increased by the poor quality of the milks purchased for analysis in the Seaforth Division. Cases of *watered* milk are now not more numerous here than in the County as a whole, but no less than 90 samples out of 248 failed to reach the limit for fat fixed by the Board of Agriculture, such cases being more than four times as frequent here as in the rest of the County area.

“ The usual explanation given by the vendors is that this deficiency in fat is caused by the unequal intervals between the milkings, and that it is necessary for their trade that these unequal intervals should be maintained.

“ There appears to be a commercial advantage to the vendors in getting on their rounds early in the afternoon, to which end the cows are often milked about 1-30 p.m., resulting in a very long interval between that hour and the following morning milking. As a result the morning milk is poor in quality, but abundant in quantity, and if sold at the same price as the afternoon milk it is evident that those who purchase morning milk only are, on the whole, not receiving full value for their money.

“ The Courts very commonly hold (and it is invariably urged in defence) that, in order to convict, something must



have either been added to or taken from the milk, but this method of milking, while doing neither, certainly has the effect of altering the 'substance and quality' of the article to a material extent to the detriment of the morning milk.

“Excluding the Seaforth Division, the proportion of adulterated and deficient milks for the rest of the Administrative County is reduced to 10·84 per cent., which may be regarded as a tolerably satisfactory figure.

“The average composition of the milk purchased for analysis in the County for the past three years is shown in the following table :—

Month.	% Fat.			% Non-latty Solids.		
	1912.	1913.	1914.	1912.	1913.	1914.
January .....	3·53	3·60	3·60	8·83	8·84	8·88
February .....	3·46	3·58	3·56	8·79	8·80	8·78
March .....	3·49	3·56	3·68	8·70	8·79	8·83
April .....	3·54	3·65	3·53	8·71	8·78	8·82
May .....	3·45	3·61	3·46	8·99	8·84	8·91
June .....	3·54	3·59	3·43	8·87	8·90	8·83
July .....	3·49	3·68	3·57	8·77	8·80	8·75
August .....	3·61	3·60	3·70	8·80	8·80	8·60*
September .....	3·85	3·83	3·72	8·86	8·83	8·92
October .....	3·94	3·81	3·80	8·86	8·83	8·89
November .....	3·82	3·73	3·70	8·92	8·78	8·86
December .....	3·74	3·76	3·52	8·80	8·78	8·85
Annual Average...	3·63	3·67	3·59	8·83	8·81	8·80
No. of samples analysed .....	2094	2585	2540	2094	2585	2540

\* Only 17 samples were analysed in August, 1914.

“The following table shows the percentages of milk samples falling between certain limits of composition :—

Fat.	Percentage of Milk Samples taken.		
	1912.	1913.	1914.
Below 2.5%	1.25	0.97	0.95
2.5 — 2.95	8.00	7.03	8.58
3.0 — 3.95	66.80	67.08	69.88
4% and over	23.95	24.92	20.59
	100.00	100.00	100.00

Non-fatty Solids.	Percentage of Milk Samples taken.		
	1912.	1913.	1914.
Below 8.0%	1.60	2.13	1.14
8.0 — 8.45	8.15	7.77	6.69
8.5 — 8.95	53.85	56.95	52.84
9% and over	36.40	33.15	39.33
	100.00	100.00	100.00

NOTE.—*The foregoing tables include all samples of milk purchased for analysis, with the exception of those sold as skimmed milk.*

“ From the results recorded in the first table, it is evident that the average composition of the milk sold is well above the limits fixed by the Board of Agriculture in both respects, and that the variations due to season and weather are of very little practical importance.

“ From the second table it is seen how rarely milk samples are found to fall seriously below either limit, in spite of the fact that all those taken—good and bad—are included.

“ Fifty-four samples of milk were taken for comparative purposes in suspected cases after having the cows milked in

the presence of the Police. In only one instance were the non-fatty solids below 8·5 per cent., and in this case the other analytical data were abnormal—but in 25 cases the fat was below 3 per cent., of which 19 occurred in the Seaforth Division.

“ In regard to cases of fat deficiency in milk drawn from cows under supervision, it must be borne in mind that, besides the unequal milking intervals, other factors have considerable influence. Thus, by neglecting to strip the cows dry, a sample, poor in fat, may readily be obtained, and it is not always possible to ascertain if the milking has been properly done.

“ All samples of milk are systematically examined for the usual preservatives.

“ Boracic acid and borates were absent in every case, but in three samples (all supplied by one vendor on the same occasion) a small quantity of formaldehyde was found.

#### *Butter.*

“ Six hundred and fifteen samples of butter (12·2 per cent. of the total) have been analysed during the year.

“ In two cases margarine *per se* was sold as butter, both purchases having been preceded by an informal one with a like result.

“ In one other case the butter was adulterated with 33 per cent. foreign fats; in three cases 20·8 per cent., 16·9 per cent., and 16·7 per cent. of water; in four cases 7·8 per cent., 7·0 per cent., 6·5 per cent., and 5·3 per cent. of salt; and in one case about 1 per cent. of sugar respectively were present.

“ The statutory limit for water in butter is 16 per cent. There are no such limits for salt and sugar, but the former seldom exceeds 5 per cent., and the latter should not be



present at all. Sugar used in such proportions as 1 per cent. would have no preservative power, and the only reason for its use appears to be to conceal excessive saltiness.

“ In three cases an excess of water over 16 per cent. was notified by a label exhibited in the shop.

“ The whole of the samples of butter were examined for borate preservatives, with the following results :—

No sample contained more than 0·5 per cent. (which was the limit recommended by the Departmental Committee on Food Preservatives in 1900).

Fifty-seven samples contained from 0·5 per cent. down to mere traces, and 558 contained none.

90·7 per cent. of the samples of butter were therefore, free from borate preservative, again showing an increase over the figures for past years.

The average percentage of boracic acid in the borated butters was 0·16 per cent.

“ The year's results as regards butter are again eminently satisfactory.

#### *Margarine.*

“ One hundred and two samples have been analysed during the year.

“ One sample contained 16·7 per cent. water, but no other adulteration of this article has to be recorded. In five cases, however, it was not properly labelled in accordance with the Margarine Act.

“ The whole of the samples have been analysed for borate preservatives, with the following results :—

No sample contained more than 0·5 per cent., but 99 contained from 0·5 per cent. down to mere traces, only three being free from this preservative, which was, therefore, present in 97·1 per cent. of the samples.

The average percentage of boracic acid present was 0·24 per cent.

These results are in accordance with the experience of previous years.

*Jam, Marmalade, and Fruit Jelly.*

“ Fifty-nine samples have been analysed during the year.

“ Apart from the use of preservatives (which is referred to later in this Report), the principal adulterant is apple pulp or juice.

“ Four samples contained the former in material quantity, varying from 15 to 25 per cent., in one case associated with a small quantity of added starch.

“ In five other cases apple pulp was present, but in relatively small amount, this being probably due to the use of imperfectly filtered apple juice.

“ This latter addition is now very common in jams made from the more expensive kinds of fruit, but is usually acknowledged with more or less clearness on the labels. In most cases the statements made refer to the addition as an ‘improvement,’ but some of the labels are so indistinctly printed that careful scrutiny is necessary in order to perceive the information they are supposed to convey.

*Ground Almonds.*

“ Twenty-nine samples have been analysed during the year, and three were adulterated with ground rice, associated in one case with ground earthnut and in another with ground cashew nut. In nine or ten other cases the presence of nuts other than almond was suspected, and the subject is at present under investigation, with a view to elucidating a satisfactory method of detecting certain adulterants.

“ The high price of almonds makes this article a peculiarly tempting field for adulteration.

*Spirits.*

“Two hundred and fifty-seven samples of whiskey, 93 of rum, and 28 of gin have been analysed during the year.

“Thirty-eight whiskies, 9 rums, and 3 gins were diluted with water beyond the statutory limits—representing 13·2 per cent. of the samples examined—an increase of 6·6 per cent. over the figure for 1913, the number of cases having thus precisely doubled.

*Salt of Tartar.*

“This is a popular name for carbonate of potash, which has a considerable sale in some localities as a hairwash.

“Early in the year my attention was called to the fact that samples of this article had been found to be seriously contaminated with arsenic, and 86 samples were accordingly purchased in different districts of the County. On analysis quantities of arsenic, varying from 0·2 to 14·5 grains per pound, were found in 56 of the samples (20 of them having been purchased in duplicate).

“The contamination was traceable partly to impure sulphuric acid and partly to arsenical fuel used in the manufacture of the commercial article.

“A number of cases were brought before the Courts, with the object of calling serious attention to the matter, and were withdrawn on undertakings being given to stop the sale of the contaminated article. There is reason to believe that this course has had very satisfactory results.

*Hogless Lard.*

“A sample bearing the above incongruous description was received from the Wigan Division. It was devoid of lard, and consisted of a mixture of 80 per cent. cotton seed oil and 20 per cent. of hard beef fat.



*Preservatives in Perishable Articles.*

“ Besides the samples of milk, butter, and margarine already referred to, the following articles have been examined for the preservatives commonly employed in them :—

9 creams, of which one was free from boracic acid ;

2 contained 0·26 per cent. and 0·33 per cent. boracic acid, the presence of which was not declared by label, as prescribed by the Milk and Cream Regulations ;

5 contained from 0·28 per cent. to 0·43 per cent. boracic acid, and were properly labelled ;

1 contained 0·61 per cent. boracic acid, the amount stated on the label being ‘ not exceeding 0·5 per cent.’

59 Jams (including marmalade and fruit jellies), of which

44 were free from salicylic and benzoic acids ;

7 contained not more than 1 grain of salicylic acid per lb. ;

4 contained from 1·1 to 1·75 grains of salicylic acid per lb. ;

4 contained from 3·5 to 5·4 grains of benzoic acid per lb.

17 potted meats and fish, of which

5 potted meats and 1 lobster paste were free from preservatives ;

1 shrimp paste contained 16 grains boracic acid per lb. ;

1 potted shrimps contained 66 grains boracic acid per lb. ;

1 potted lobster contained  $17\frac{1}{2}$  grains boracic acid per lb. ;

1 potted lobster contained 49 grains boracic acid per lb. ;

1 lobster paste contained 45 grains boracic acid per lb. ;

- 1 lobster paste contained 26 grains boracic acid and 26 grains benzoic acid per lb. ;
- 1 shrimp paste contained 23 grains boracic acid and 20 grains benzoic acid per lb. ;
- 1 potted crab contained 7 grains boracic acid and  $1\frac{1}{2}$  grains benzoic acid per lb.
- 1 salmon and shrimp paste contained 5 grains boracic acid and 1 grain benzoic acid per lb. ;
- 1 salmon and shrimp paste contained 3·3 grains boracic acid and 6·8 grains benzoic acid per lb. ;
- 1 potted chicken, ham, and tongue contained 15 grains boracic acid and 7 grains benzoic acid per lb.
- 1 tomato sauce contained  $2\frac{1}{2}$  grains of boracic acid per ounce.
- 1 tomato sauce contained  $\frac{1}{2}$ -grain salicylic acid per ounce.
- 1 sausages and 1 lemon cheese contained no preservatives.

### *Informal Samples.*

“ Nine hundred and eighty-four of the samples were purchased without notice to the sellers that they were intended for analysis. They comprised milk 12, cream 6, butter 311, cheese 14, margarine 43, lard 60, tea, coffee, and cocoa 165, sugar, confectionery, and jam 38, spices and condiments 140, bread and flour 13, rice, oatmeal, barley, tapioca, and arrowroot 11, baking powder, cream of tartar, and yeast 17, ground almonds 18, potted and tinned meats and fish 19, beer 17, whiskey 5, drugs 85, and sundries 10.

“ Eight hundred and ninety-one of the above samples were genuine, and of the remaining 93, only 45 (of which 26 were salt of tartar) were seriously adulterated.

“ The advantages of informal sampling are now well recognised. Useful information is obtained thereby without

either exciting suspicion or causing annoyance, the sampling can be carried out rapidly and with greater economy, and the whole of the sample purchased is available for examination in the original package, an important convenience in the case of tinned and bottled goods.

“ When an informal sample is found to be adulterated, a formal purchase is subsequently made whenever possible, but the method of informal sampling is not convenient in sparsely populated districts, or where for any reason a subsequent sample of the same article cannot readily be obtained.

### *Prosecutions.*

“ There have been 129 prosecutions in respect of adulterated samples and other offences in 1914.

“ In 90 cases the defendants were fined or ordered to pay the costs of the prosecution, 30 cases were withdrawn, 1 was dismissed on proof of warranty, and 8 were dismissed for other reasons.

“ Sixty-five fines were imposed as follows :—One £10, nine £5, one £4, two £3, seven £2, sixteen £1, one 10s. 6d., fifteen 10s., five 5s. 6d., and eight 5s.

“ The average fine, including 25 cases in which costs only were ordered to be paid by the defendants, was £1 3s. 7½d., a decrease of 11s. 1½d. on the average fine for 1913.

“ For milk adulteration the penalties ranged from costs only to £10, averaging £1 15s. 3d. for added water, and 11s. 2d. for deficiency in cream.

“ Fifteen milk cases were withdrawn for various reasons, the costs of the prosecution being paid in seven instances. Twelve of these cases occurred in the Seaforth Division, and in six of them the defendants gave assurances to the Court



TABLE SHOWING THE NUMBER OF LEGAL PROCEEDINGS TAKEN IN THE ADMINISTRATIVE COUNTY UNDER THE SALE OF FOOD AND DRUGS ACTS AND MILK AND CREAM REGULATIONS, ARISING OUT OF SAMPLES PURCHASED, AND OTHERWISE, DURING THE YEAR 1914, WITH THE RESPECTIVE RESULTS.

DIVISION.	Number of Samples reported as offences.	Additional Offences.	Number of Prosecutions.	Number Convicted or Ordered to Pay Costs.	Number Withdrawn.	Number of Dismissals.		Number of cases in which no Legal Proceedings were taken.	Fines.	Costs.
						On Warranty.	For other reasons.			
									£ s. d.	£ s. d.
Lonsdale North ... ..	1	...	1	1	...	...	...	...	Nil	1 2 6
Lonsdale South ... ..	5	...	1	...	...	...	1	4	Nil	Nil
Garstang ... ..	4	...	4	4	...	...	...	...	1 10 0	3 7 6
Kirkham ... ..	1	...	1	1	...	...	...	...	0 5 0	1 19 6
Blackburn Lower ... ..	6	...	5	5	...	...	...	1	7 15 0	7 10 8½
Blackburn Higher ... ..	13	...	12	8	1	...	3	1	7 10 0	15 3 0
Church ... ..	4	...	4	3	...	...	1	...	4 0 0	5 3 4
Rossendale ... ..	2	...	2	2	...	...	...	...	6 0 0	7 9 8
Leyland... ..	4	...	2	2	...	...	...	2	0 5 0	2 4 7
Bolton ... ..	6	...	5	3	2	...	...	1	11 0 0	8 8 9
Bury .. ...	10	...	6	4	1	1	...	4	4 10 0	4 14 6½
Rochdale ... ..	4	1	4	4	...	...	...	1	6 10 6	7 2 9
Ashton-under-Lyne ... ..	11	...	8	7	1	...	..	3	1 17 6	12 7 11
Manchester ... ..	20	2	18	11	7	...	...	4	13 10 0	11 5 0
Seaforth ... ..	32	...	27	8	16*	...	3	5	11 0 0	15 2 6
Ormskirk ... ..	6	1	5	4	1	...	...	2	1 15 0	2 14 0
Prescot ... ..	...	...	...	...	...	...	...	...	Nil	Nil
Widnes ... ..	5	...	5	5	...	...	...	...	6 10 0	2 15 8
Warrington ... ..	10	...	10	10	...	...	...	...	8 10 0	20 11 3
Wigan ... ..	6	...	6	6	...	...	...	...	12 10 0	8 1 5
County Police ... ..	150	4	126	88	29	1	8	28	104 18 0	129 4 11
Local Authorities ... ..	5	...	3	2	1	...	...	2	1 10 0	4 4 0
Totals... ..	155	4	129	90	30	1	8	30	106 8 0	133 8 11

\* 5 cases were dropped in S.D. owing to pressure of special duties on the Police at the outbreak of War.



that they would endeavour to make arrangements to improve the quality of their milk. In some of these cases, however, subsequent samples have shown no better results.

“Thirteen cases of salt of tartar contaminated with arsenic were withdrawn, on the defendants paying the costs of the prosecutions and giving an undertaking to withdraw the contaminated article from sale. This undertaking appears to have been faithfully carried out.

“Of the nine cases dismissed, one (raspberry and gooseberry jam) was dismissed on warranty, and the remaining eight cases were all of milk.

“In one of the latter, the vendor had purchased the milk from another person, who was fined.

“In another case the defendant was carrying on her late husband's business as executrix, and apparently was not considered personally responsible. In six other cases the defendants stated on oath that the milk was sold as obtained from the cows, which statement was accepted by the Magistrates, who administered cautions in some instances.”





SUMMARY OF THE REPORTS

RECEIVED FROM

MEDICAL OFFICERS OF HEALTH

OF

URBAN AND RURAL DISTRICT COUNCILS

FOR THE YEAR 1914.





# URBAN DISTRICTS.

**Abram.**—(Area in acres, 1,984; Estimated Population, 7,198).—*Medical Officer of Health*, ANDREW O. BENTHAM, M.R.C.S. ; *Salary*, £40.

## *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	29·7	*15·0	1·66	1·25	112
1913.....	30·8	14·6	3·60	0·28	127
Mean of 10 years					
1904-1913 .....	30·0	14·5	2·22	0·56	138
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1·1	+0·4	—1·94	+0·97	—15
<i>Ten Years' Average</i> .....	—0·3	+0·5	—0·56	+0·69	—26

\*Death-rate for 1914 corrected, for differences in sex and age constitution, by “factor” (1·1456) supplied by Registrar General=17·1 per 1,000.

Owing to subsidences of land, consequent on mining operations, large areas of land are more or less permanently under water. The Notification of Births Act became operative on October 1st, and a part-time health visitor was appointed. In Bamfurlong Ward, although the birth-rate was lower than in any of the other Wards, the infant mortality corresponded to 197 per 1,000 births. Health visitor requested to pay special attention to certain parts of this Ward.

† *Infectious Diseases.*—Cases notified: diphtheria and membranous croup 20 (2 deaths), scarlet fever 53 (2 deaths),

† NOTE.—In the Summaries the deaths from tuberculosis are not given, as they often do not relate to the cases actually notified during the year. The deaths are given in the Tables II. and IV. appended.

enteric fever 7 (1 death), erysipelas 9, pulmonary tuberculosis 8, other forms of tuberculosis 8, ophthalmia neonatorum 3. Deaths from non-notifiable diseases: measles 3, whooping cough 1, diarrhoea 3. Scarlet fever very prevalent during the fourth quarter, commencing in Plank Lane Ward and spreading throughout the district, and at this time a severe outbreak of measles occurred in Abram Brow and Bamfurlong Wards. To cope with the former disease, school closure resorted to. Specimens submitted for bacteriological examination: blood 1, sputum 2.

*Hospital Accommodation.*—Corrugated iron building, with 4 beds, for small-pox, and brick hospital, 8 beds, for other infectious diseases. Cases treated: diphtheria 3, scarlet fever 50 (2 deaths), enteric fever 6 (1 death).

*Disinfection.*—Manlove's steam apparatus at hospital; 1,189 articles disinfected. Seventy-one houses and 3 schools fumigated.

*Water Supply* obtained from service reservoir, supplied by Liverpool Corporation from their Rivington reservoir.

*Sewage.*—Treatment: septic tanks, triple contact beds, storm filters, and land. Sewer extensions at Platt Bridge. Drains tested with smoke, and flushing frequently carried out.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected under Section 17 of the 1909 Act 35, seven condemned as unfit for habitation and closing orders made. Council have under consideration the deficiency of housing accommodation in Abram Brow and Bamfurlong Wards. At certain schools playing grounds require paving, and better lavatory accommodation providing. Cowsheds generally satisfactory, but at several, improvements needed as regards lighting, ventilation, and storage of

manure. Factory inspections 32; want of cleanliness and insufficient ventilation in 3 cases. Canal boats examined 60, infringements 6. Seventy-six privy middens converted, but 888 still remain. The Inspector (Mr. Roby) served 83 notices; nuisances abated 430.

Notable sanitary improvements during 1914.      Sewer extension at Platt Bridge; adoption of Notification of Births Act.

Sanitary requirements.      Conversion of privy middens; paving of private streets; separation of common yards and back passages.

**Accrington (Borough).**—(Area in acres, 3,427; Estimated Population, 45,775).—*Medical Officer of Health*, ARTHUR GREENHALGH, M.R.C.S., D.P.H.; *Salary*, £100.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·3	*13·9	1·44	0·87	117
1913.....	19·6	14·2	1·33	0·79	116
Mean of 10 years					
1904-1913 .....	20·5	14·0	1·21	0·83	126
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·3	—0·3	+0·11	+0·08	+1
<i>Ten Years' Average</i> .....	—1·2	—0·1	+0·23	+0·04	—9

\* Corrected by "factor" (1·0833)=15·0 per 1,000.

Notification of Births Act adopted and operative from September; whole-time health visitor appointed. Infant mortality rate varied from 63 in Peel Park Ward to 169 in Central Ward.



*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 36 (9 deaths), scarlet fever 95, enteric fever 10 (3 deaths), erysipelas 35, puerperal fever 3 (1 death), pulmonary tuberculosis 76, other forms of tuberculosis 33, ophthalmia neonatorum 2. Deaths from non-notifiable diseases: measles 26, whooping cough 11, diarrhœa 17. Specimens submitted for bacteriological examination: diphtheria 4, enteric fever 4, tuberculosis 4.

*Hospital Accommodation.*—For small-pox, a corrugated iron building, 24 beds; no provision for ordinary infectious diseases.

*Disinfection.*—Goddard, Massey, and Warner's steam disinfector at Hyndburn Road dépôt. Articles disinfected 1,353, rooms 235, schools 16.

*Water Supply* obtained from Dean Clough, Mitchell's, and Burnley Road reservoirs, and also from deep well at Altham.

*Sewage.*—Treatment: septic tanks, sedimentation tanks, sprinkler beds, and humus tanks. New sewer constructed in Green Haworth district.

*Scavenging* by Authority, satisfactory. Six-cell refuse destructor provided.

*Sanitary Inspection.*—Houses inspected 155, unfit for habitation and closing orders made 3, demolished 3, defects remedied without closing orders 117, after closing orders 2. Public abattoir extensively used; 8,300 lbs. of beef, pork, &c., destroyed, including 17 carcasses condemned for tuberculosis. Cowsheds received 104 visits. Veterinary surgeon appointed to examine all milch cows. Inspections of factories and workshops 79, defects found and remedied 24. Two privies and 30 pail closets converted to water closets. Only 28 privy middens exist, but there are 1,035 pail closets; Council

contribute half cost of pail conversions. The Inspector (Mr. Diggle) served 381 notices, nuisances remedied 333. Smoke observations 11.

Notable sanitary improvements. Sewering of Green Haworth district.

Sanitary requirements. Infectious diseases hospital; discontinuance of waste-water closet system and adoption of fresh-water system; provision of ashbins.

**Adlington.**—(Area in acres, 1,062; Estimated Population, 4,600).—*Medical Officer of Health*, W. C. RIGBY, M.B., D.P.H.; *Salary*, £40.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·1	*10·6	0·21	0·65	39
1913.....	22·4	11·1	1·52	0·65	106
Mean of 10 years					
1904-1913 .....	24·7	11·7	1·09	0·75	107
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·3	—0·5	—1·31	nil.	—67
<i>Ten Years' Average</i> .....	—2·6	—1·1	—0·88	—0·10	—68

\* Corrected by "factor" (1·0729)=11·3 per 1,000.

*Infectious Diseases.*—Cases notified: scarlet fever 6, enteric fever 1, erysipelas 10, puerperal fever 1, pulmonary tuberculosis 10, other forms of tuberculosis 9, ophthalmia neonatorum 1. Death from non-notifiable disease: diarrhœa 1.

*Hospital Accommodation.*—For ordinary infectious diseases joint hospital at Heath Charnock provided. No provision at present for small-pox cases. Cases treated: scarlet fever 6.

*Disinfection.*—No proper appliances ; houses disinfected 8.

*Water Supply* obtained from Blackrod Urban District Council.

*Sewage.*—Treatment: chemical precipitation, filtration, and irrigation. Storm-water beds provided.

*Scavenging* by Authority, satisfactory. Refuse deposited on isolated tip.

*Sanitary Inspection.*—Houses inspected 232 ; insanitary conditions found consisted mainly of defective back yards and roofs, dampness, and want of cleansing. Factories and workshops received 76 visits, 6 defects remedied. Forty-one privy middens converted to water closets and two to pails ; 556 privies still exist. Inspector served 125 notices. Smoke observations 15.

Sanitary requirement.

Conversion of privies.

**Ashton-in-Makerfield.**—(Area in acres, 6,251 ; Estimated Population, 22,687).—*Medical Officer of Health*, NATHAN HANNAH, L.R.C.P.E. ; *Salary*, £125.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	30·5	*13·1	1·19	0·44	109
1913.....	30·9	16·3	4·03	0·67	175
Mean of 10 years					
1904-1913 .....	32·5	14·6	2·55	0·68	147
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·4	—3·2	—2·84	—0·23	—66
<i>Ten Years' Average</i> .....	—2·0	—1·5	—1·36	—0·24	—38

\* Corrected by " factor " (1·0937) = 14·3 per 1,000.

Notification of Births Act adopted ; health visitor made 2,833 visits.



*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 32 (3 deaths), scarlet fever 150 (5 deaths), enteric fever 20 (4 deaths), erysipelas 15, puerperal fever 2 (both fatal), pulmonary tuberculosis 39, other forms of tuberculosis 22, ophthalmia neonatorum 4. Non-recognised cases of scarlet fever and indiscriminate visiting again great factors in the spread of the disease.

*Hospital Accommodation* for ordinary infectious diseases, 40 beds at Long Lane; for small-pox, 8 beds at Edge Green. Cases treated: diphtheria 19 (2 deaths), scarlet fever 119 (4 deaths), enteric fever 18 (3 deaths).

*Disinfection.*—Steam apparatus (Goddard, Massey & Co.) at hospital. Houses disinfected 194, articles 952.

*Water Supply* obtained mainly from Liverpool Corporation (Rivington), supplemented by a reservoir at North Ashton, belonging to the Urban Council.

*Sewage.*—New works opened recently. Treatment: precipitation and sprinkler beds. Subsidences, due to mining operations, necessitate constant attention to sewers.

*Scavenging* by Authority, on the whole, fair. House refuse deposited on tips.

*Sanitary Inspection.*—Dwelling-houses inspected 462, unfit for habitation 5, representations for closing orders 5, houses demolished 12; character of defects found—dilapidation, external and internal. Shortage of housing accommodation throughout the district; this matter receiving consideration of the Council. Cowsheds—45 in number—on the whole, well lighted, ventilated, &c., but 13 required limewashing and cleaning. To factories and workshops 138 visits made, 6 defects remedied. Privy middens non-existent, but there are 3,754 pail closets. The Inspector served 265 notices, nuisances remedied 632. No smoke observations taken.

Notable sanitary improvement.

Completion of new sewage works

Sanitary requirements.

Improved streetage ; attention to yard areas and approaches to property ; more stringency in regard to remedying of nuisances and insanitary conditions at farm yards ; refuse destructor.

**Ashton-under-Lyne (Borough).** — (Area in acres, 1,345 ; Estimated Population, 45,179).—*Medical Officer of Health*, JOHN W. TALENT, M.D., D.P.H. ; *Salary*, £300.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·3	*18·5	3·40	1·21	186
1913.....	23·3	17·1	2·39	1·15	164
Mean of 10 years					
1904-1913 .....	24·9	17·5	1·96	1·32	163
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	nil.	+1·4	+1·01	+0·06	+22
<i>Ten Years' Average</i> .....	—1·6	+1·0	+1·44	—0·11	+23

\* Corrected by " factor " (1·0765)=19·9 per 1,000.

Notification of Births Act in force ; second health visitor appointed. Attendance at " School for Mothers " necessitated opening of a second school. Crèche utilised to full capacity. Increase in death-rates " owing to the excess of scarlet fever, measles, and whooping cough."

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 20 (4 deaths), scarlet fever 357 (14 deaths),

enteric fever 14 (6 deaths), erysipelas 45 (3 deaths), puerperal fever 1, cerebro-spinal meningitis 1, pulmonary tuberculosis 102, other forms of tuberculosis 5, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: measles 35, whooping cough 32, diarrhœa 63. Death-rates from measles and whooping cough highest recorded during the past eight years. Diarrhœa fatalities again numerous. Notifications of scarlet fever considerably in excess of the average. Specimens submitted for bacteriological examination: diphtheria 15, enteric fever 7, tuberculosis 4, milk 6.

*Hospital Accommodation* for small-pox at joint hospital, Hartshead; ordinary infectious cases removed to Borough fever hospital (20 beds). Cases treated: scarlet fever 107 (4 deaths), enteric fever 7 (3 deaths).

*Disinfection*.—Steam disinfecting apparatus at Town's yard. Articles of clothing and bedding stoved 1,979, library books disinfected 102. Houses fumigated 356.

*Water Supply* obtained from Ashton, Stalybridge, and Dukinfield joint waterworks.

*Sewage*.—Treatment: precipitation tanks, double contact beds, storm filters, and continuous filtration. Scheme of extensions submitted to Local Government Board. House drains tested and flushed.

*Scavenging* by Authority. About three-fourths of the refuse dealt with by destructor, remainder deposited on tips.

*Sanitary Inspection*.—Houses inspected 4,987, unfit for human habitation and closing orders issued 13. Sanitary condition of schools much improved. Slaughter-houses and bakehouses received 191 visits. Successful legal proceedings taken for exposing unsound fish for sale. Cowsheds received 97 visits; all cows examined twice a year by veterinary surgeon. Inspections of factories and workshops



307, defects found 27, remedied 25. No privy middens in district, and only 12 pail closets ; fresh-water closets 3,129, waste-water closets 8,014. The Chief Inspector (Mr. Morris) served 465 notices ; nuisances abated 895 ; legal proceedings in 5 cases, in each instance defendant ordered to abate nuisance and to pay costs. Smoke observations 136, successful prosecutions in 4 cases.

Notable sanitary improve-      Several dilapidated roads and  
ment.                                      passages repaired and flagged.

**Aspull.**—(Area in acres, 1,906 ; Census Population, 8,276).—  
*Medical Officer of Health*, L. COOKE, L.R.C.P. ; *Salary*,  
£45.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	
1914.....	28.1	*14.4	1.57	0.48	81
1913.....	30.8	16.1	2.65	0.96	133
Mean of 10 years					
1904-1913 .....	33.2	16.6	2.87	0.56	156

*Increase or Decrease*  
*in 1914 on—*

<i>Previous Year</i> .....	—2.7	—1.7	—1.08	—0.48	—52
<i>Ten Years' Average</i> .....	—5.1	—2.2	—1.30	—0.08	—75

\* Corrected by “ factor ” (1.0745)=15.4 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 12 (3 deaths), scarlet fever 21, enteric fever 16 (3 deaths), erysipelas 8, puerperal fever 2 (1 death), pulmonary tuberculosis 1, other forms of tuberculosis 5, ophthalmia neonatorum 2. Deaths from non-notifiable

diseases : measles 2, whooping cough 2, diarrhœa 3. In six cases of diphtheria the infection “ was traced to contamination of surface soil in emptying middens.”

*Hospital Accommodation.*—Wigan Corporation hospitals available for small-pox and other infectious diseases, the former at a fee of £3 3s. per week per patient, and the latter £2 2s. per week. Cases treated : scarlet fever 4, enteric fever 10 (2 deaths).

*Disinfection.*—Wigan sanatorium apparatus may be used. Houses disinfected 43.

*Water Supply* from Bolton Corporation ; pressure much improved.

*Sewage* dealt with by Wigan Corporation.

*Scavenging* satisfactorily carried out by contract. Tarpaulin covers now provided for carts.

*Sanitary Inspection.*—Houses inspected 53. Visits to factories and workshops 36. Seventy-eight privies converted to water closets ; Council make the connection to sewers free, and no extra water rate is levied. Over 700 privy middens still exist. The Inspector (Mr. Gibson) served 51 notices ; nuisances remedied 51.

Notable sanitary improvements.	Better water supply ; conversion of privy middens.
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Sanitary requirements.	Attention to insanitary houses ; paving of common yards ; further conversion of privies ; enforcement of cowshed regulations.
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**Atherton.**—(Area in acres, 2,265 ; Estimated Population, 20,500).—*Medical Officer of Health*, JAMES MARSH, M.B. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27.1	*13.0	1.95	1.31	109
1913.....	27.1	15.4	2.95	1.00	171
Mean of 10 years					
1904-1913 .....	28.4	14.1	2.39	0.93	145
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	nil.	—2.4	—1.00	+0.31	—62
<i>Ten Years' Average</i> .....	—1.3	—1.1	—0.44	+0.38	—36

\* Corrected by “ factor ” (1.1161)=14.5 per 1,000.

Notification of Births Act, 1907, in force, and whole-time health visitor appointed. Establishment of “ babies’ welcome ” and dried milk depôt resulted in marked improvement in many conditions incident to infant life. Advice and assistance offered to “ expectant ” mothers.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 61 (3 deaths), scarlet fever 61, enteric fever 9, erysipelas 15, puerperal fever 7, pulmonary tuberculosis 42, other forms of tuberculosis 21, ophthalmia neonatorum 6. Deaths from non-notifiable diseases: measles 9, whooping cough 14, diarrhœa 14. School closure in December on account of diphtheria. Dr. Marsh again urgently suggests the inclusion of whooping cough as a notifiable disease.

*Hospital Accommodation* provided jointly with Leigh, Tyldesley, and Golborne at Astley. Cases treated: diphtheria 18 (1 death), scarlet fever 34, enteric fever 6.

*Disinfection.*—Steam apparatus (Mason’s) available at gas works ; houses disinfected 151.



*Water Supply*, of good quality, from Manchester and Bolton.

*Sewage* treated at Leigh and Atherton sewage works by precipitation tanks, continuous filters, land, humus tanks, and storm lagoons; a few outlying cottages without proper drainage system.

*Scavenging* by Authority. Destructor dealt with 3,210 loads of refuse.

*Sanitary Inspection*.—Houses inspected 294, unfit for habitation 7, closing orders made 7, defects remedied 256. Shortage of housing accommodation; at least 300 more houses required. Food destroyed 1,391 lbs. Factories and workshops received 59 visits. Privy middens converted to water closets 82, only 75 remain. The Inspector (Mr. Jepson) served 59 notices; nuisances abated 671. Smoke observations 14.

Sanitary requirement.

Houses for working classes.

**Audenshaw**.—(Area in acres, 1,241; Estimated Population, 8,274).—*Medical Officer of Health*, D. HUBERT CHEETHAM, M.B.; *Salary*, £40 (no claim).

### *Vital Statistics*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·4	*13·6	1·57	0·48	134
1913.....	23·4	15·6	0·73	1·22	140
Mean of 10 years					
1904-1913 .....	23·7	14·0	1·53	0·91	146
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·0	—2·0	+0·84	—0·74	—6
<i>Ten Years' Average</i> .....	—1·3	—0·4	+0·04	—0·43	—12

\* Corrected by "factor" (1·0790)=14·6 per 1,000.

*Infectious Diseases*.—Cases notified: diphtheria and

membranous croup 10, scarlet fever 62 (1 death), erysipelas 4, pulmonary tuberculosis 9, other forms of tuberculosis 4. Deaths from non-notifiable diseases: measles 2, whooping cough 7, diarrhoea 3. Four specimens submitted for bacteriological examination.

*Hospital Accommodation.*—Small-pox hospital provided at Hartshead jointly with Ashton-under-Lyne and neighbouring Authorities; for other diseases, 2 beds retained at Hyde hospital. Cases treated: scarlet fever 5.

*Disinfection.*—Ashton-under-Lyne steam apparatus available; houses fumigated 82.

*Water Supply* mainly from Ashton-under-Lyne; a small portion of district supplied by Manchester Corporation.

*Sewage* treated at Ashton-under-Lyne, Dukinfield, and Stalybridge joint sewage works by precipitation and filtration. Areas without drainage system—Hanover Street and Stelfox Lane.

*Scavenging* by contract, satisfactory.

*Sanitary Inspection.*—Houses inspected 409, visits to dairies and cowsheds 73, slaughter-houses 50, offensive trades 30, bakehouses 25, factories and workshops 140. Cows inspected twice a year by veterinary inspector. Drains inspected 150. Privy middens converted to water closets 153, to pails 2; there still remain 122 privy middens, 62 pail closets, and 1,367 waste-water closets. The Inspector (Mr. Doxey) served 154 notices, nuisances remedied 135. Smoke observations 3.

Sanitary requirements.

Total conversion of privy middens to water closets; reduction in number of waste-water closets; revision of cowshed register.

**Bacup (Borough).** — (Area in acres, 6,120 ; Estimated Population, 22,500).—*Medical Officer of Health*, to April 15th, JOHN BROWN, M.D., D.P.H. ; from April 16th, J. PERCIVAL BROWN, M.B. ; *Salary*, £155.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·7	*17·9	1·24	1·20	125
1913.....	18·8	17·1	0·80	0·80	101
Mean of 10 years					
1904-1913 .....	20·6	15·7	1·06	0·84	117
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·1	+0·8	+0·44	+0·40	+24
<i>Ten Years' Average</i> .....	—1·9	+2·2	+0·18	+0·36	+8

\* Corrected by " factor " (1·0491)=18·7 per 1,000.

Notification of Births Act not adopted. A health visitor required, but the time not considered opportune for making the appointment.

*Infectious Diseases.*—Cases notified: small-pox 2, diphtheria and membranous croup 17 (2 deaths), scarlet fever 193 (5 deaths), enteric fever 6 (3 deaths), erysipelas 31 (1 death), puerperal fever 2 (both fatal), pulmonary tuberculosis 41, other forms of tuberculosis 17, ophthalmia neonatorum 4, chicken-pox 37. Deaths from non-notifiable diseases: measles 6, whooping cough 8, diarrhoea 4. Five schools closed on account of infectious disease. Scarlet fever epidemic in the months of February, March, and April, when 112 cases occurred.

*Hospital Accommodation.*—For small-pox, joint hospital at Sourhall, Todmorden; two cases treated. Bury joint hospital available for other diseases; cases removed: diphtheria 3, scarlet fever 12.



*Disinfection.*—Steam apparatus at Town's yard. Houses disinfected 245.

*Water Supply.*—Corporation reservoir supplies 60 per cent. of population with upland surface water, of "excellent quality." During the year 80 houses connected to Corporation mains, but there are still over 7,000 persons obtaining water from private sources. Cases of plumbism traced to a private supply, which was subsequently discontinued.

*Sewage* treated at Ewood Bridge joint works (Bacup, Rawtenstall, and Haslingden Board) by precipitation, filtration, and land irrigation. Drains tested by smoke.

*Scavenging* by Authority, satisfactory. Destructor required.

*Sanitary Inspection.*—Houses inspected 43, unfit for habitation 9. More houses with three bedrooms desirable. Some of the slaughter-houses structurally unfit, and in unsuitable positions ; public abattoir recommended. Unsound meat destroyed 943 lbs. Many cowsheds deficient in light and ventilation. Under the Factory and Workshops Acts, 179 visits paid, and 18 notices served for various defects. Twenty-one showmen's dwelling-vans inspected and found satisfactory. Premises used for the manufacture or storage of foodstuffs visited ; some of the buildings unsuitable for the purpose. Fourteen privy middens and 121 pails converted to water closets ; half cost of conversion, up to £2, borne by Council ; 120 privy middens and 2,245 pail closets still exist. The Inspector (Mr. Barnes) served 475 notices ; nuisances abated 451. Smoke observations 42.

Notable sanitary improvement.      Sewering of Weir Village.

Sanitary requirements.

Refuse destructor ; public abattoir ; conversion of pail closets ; improvement in sanitation of cowsheds.

**Barrowford.**—(Area in acres, 1,385 ; Estimated Population, 5,800).—*Medical Officer of Health*, F. E. DE BEEHO PIM, L.R.C.P.I. ; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·6	*15·1	2·75	0·34	157
1913.....	19·8	13·6	0·86	1·55	86
Mean of 10 years					
1904-1913 .....	21·4	12·5	1·25	0·67	126
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·2	+1·5	+1·89	—1·21	+71
<i>Ten Years' Average</i> .....	—1·8	+2·6	+1·50	—0·33	+31

\* Corrected by " factor " (1·0695)=16·1 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5 (1 death), scarlet fever 9 (1 death), erysipelas 3, puerperal fever 1, pulmonary tuberculosis 2. Deaths from non-notifiable diseases : measles 12, diarrhoea 2. Severe epidemic of measles.

*Hospital Accommodation.*—It is stated that an arrangement for isolation of small-pox exists with Nelson Corporation, and with Burnley Corporation for ordinary infectious diseases, but no cases were removed.

*Disinfection.*—Steam apparatus at Nelson available. Houses disinfected 12.

*Water Supply* obtained from Nelson Corporation.

*Sewage.*—Treatment : septic tank, single contact filters, and land filtration. Extension in progress.

*Scavenging* by Authority ; ashes deposited on tips, night soil on land.

*Sanitary Inspection.*—Houses inspected 80 ; defects remedied at 22. Some cowsheds deficient in air space. One cow suspected of being tuberculous, tested with tuberculin ; negative result. Thirty-six visits made to factories and workshops. Canal boats inspected 7. Two waste-water closets and one privy converted to fresh-water closets. Notices served 35 ; nuisances remedied 69. Eleven smoke observations.

Notable sanitary improvements.	Extension of sewage disposal works in progress ; sewerage of Pasture Lane.
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Sanitary requirements.	Paving of private streets.
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**Billinge.**—(Area in acres, 4,596 ; Estimated Population, 5,060).—*Medical Officer of Health*, RICHARD O. MATHER, M.B. ; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·8	*18·5	1·58	0·79	127
1913.....	27·4	11·4	1·80	0·60	124
Mean of 10 years					
1904-1913 .....	29·3	13·4	1·47	0·55	124
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·4	+7·1	—0·22	+0·19	+3
<i>Ten Years' Average</i> .....	—1·5	+5·1	+0·11	+0·24	+3

\* Corrected by “ factor ” ( $\cdot 9812$ ) = 18·1 per 1,000.

The increase in the death-rate of 1914, as compared with last year, is mainly due to the inclusion of an unusually large number of deaths (28) in the Union Workhouse Infirmary situated in this district, of persons “ of no fixed abode,”



whose deaths are, according to the instructions of the Registrar-General, to be included in the statistics of the district in which the deaths took place.

*Infectious Diseases.*—Cases notified: diphtheria 4 (2 deaths), scarlet fever 1, enteric fever 1 (fatal), erysipelas 1, puerperal fever 1 (fatal), pulmonary tuberculosis 1, other forms of tuberculosis 5. Deaths from non-notifiable disease: diarrhœa 5.

*Hospital Accommodation.*—Isolated cottage at Brownlow—4 beds—retained for small-pox, or any emergency. Drainage and ventilation require attention.

*Disinfection.*—No proper appliances. Nine houses fumigated.

*Water Supply* from old quarry and mine workings. As there is a possibility of contamination of this water, boring operations commenced with a view to obtaining a plentiful supply of good soft water from the millstone grit.

*Sewage.*—Treatment: precipitation, with intermittent downward filtration.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Many houses of very old type exist. Houses inspected 81, unfit for habitation 4, closing orders made 2, defects remedied at 23. Erection of 20 houses required in Billinge Chapel End; Council contemplates providing 10. Sanitary conveniences and playground in connection with one school unsatisfactory. Dairies and cowsheds, although showing marked improvement, are far from complying with the regulations. Slaughter-house adjacent to dwellings, and unsatisfactory in other respects. To factories and workshops 20 visits of inspection. No privy middens converted, although over 600 exist; this class

of accommodation is still being provided to new property. The Inspector (Mr. Powell) served 34 notices, 24 being complied with.

Notable sanitary improvement.      Relaying of water mains.

Sanitary requirements.      Completion of water scheme; disinfecting apparatus; paving of yards; privy conversions.

**Bispham-with-Norbreck.**—(Area in acres, 1,346; Estimated Population, 2,850).—*Medical Officer of Health*, JAMES JOHNSON, L.F.P.S.G.; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	8·7	*13·3	nil.	0·35	40
1913.....	13·6	12·8	0·40	0·80	117
Mean of 10 years					
1904-1913 .....	16·7	14·8	0·63	0·65	99
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—4·9	+0·5	—0·40	—0·45	—77
<i>Ten Years' Average</i> .....	—8·0	—1·5	—0·63	—0·30	—59

\* Corrected by “factor” ( $\cdot 9313$ ) = 12·3 per 1,000.

Birth-rate exceptionally low, the births belonging to the district numbering only 25, against 38 deaths.

*Infectious Diseases.*—Cases notified: diphtheria 2, scarlet fever 2, pulmonary tuberculosis 2, other forms of

tuberculosis 2. No death from non-notifiable disease. Specimens bacteriologically examined : diphtheria 2, sputum 2.

*Hospital Accommodation* provided at Fylde joint hospital, Moss Side, and for small-pox at Elswick. Cases treated : scarlet fever 2.

*Disinfection*.—No proper apparatus ; formalin spray used. Houses disinfected 6.

*Water Supply* derived from Fylde Water Board's mains.

*Sewage* discharged into Irish Sea at Anchorholme, at a point near to dead-low water. Joint outfall works consist of storage culvert and iron pipe outlet. Sewers from part of Gynn Estate empty into Blackpool Corporation sewer. At a Local Government Board Inquiry into the pollution of a stream at Greenlands, the Inspector suggested that a scheme be prepared for the sewerage of Blackpool Road, from Bispham Railway Station to Myrtle Bank. Surveyor instructed to prepare, in conjunction with the Surveyor to the Fylde Rural Council, a scheme to deal with this matter. Drains at 48 old houses tested ; 30 found defective.

*Scavenging* by Authority, satisfactory. Pulverising apparatus satisfactorily deals with house refuse ; the residual powder sold to farmers for manurial purposes.

*Sanitary Inspection*.—Houses inspected 48, defects remedied at 15. To new property 712 visits of inspection made. New houses erected and certified for habitation 46. All cowsheds inspected and found satisfactory. Sanitary condition of schools very good. To factories and workshops, 65 visits paid. Two privies converted to water closets. The Inspector (Mr. Harrop) served 65 notices ; nuisances remedied 52. Smoke observations 7.

Sanitary requirement.

Sewering of Greenlands.



**Blackrod.**—(Area in acres, 2,392 ; Estimated Population, 4,014).—*Medical Officer of Health*, J. W. UNSWORTH, M.B. ; *Salary*, £35.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·4	*12·2	0·49	0·49	111
1913.....	28·3	13·8	3·03	0·75	178
Mean of 10 years					
1904-1913 .....	27·8	13·9	1·74	0·52	129

*Increase or Decrease*  
*in 1914 on—*

<i>Previous Year</i> .....	—5·9	—1·6	—2·54	—0·26	—67
<i>Ten Years' Average</i> .....	—5·4	—1·7	—1·25	—0·03	—18

\* Corrected by " factor " (1·0839)=13·2 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5 (1 death), scarlet fever 12, erysipelas 2 (1 death), poliomyelitis 2, pulmonary tuberculosis 5, other forms of tuberculosis 3, ophthalmia neonatorum 1. Death from non-notifiable disease : diarrhoea 1.

*Hospital Accommodation* at Fall Birch, provided jointly with Horwich and Westhoughton. Cases treated : diphtheria 3 (1 death), scarlet fever 9.

*Disinfection.*—Steam appliances at hospital available. Houses disinfected 22.

*Water Supply* derived from Council's waterworks at Horwich. Construction of another reservoir under consideration.

*Sewage treatment* by land irrigation.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 84, unfit for habitation 3, voluntarily demolished 3. Improvements at several shippens required, especially as regards ventilation.

Visits to factories and workshops 22. Forty privies converted to water closets; 276 remain. The Inspector (Mr. Orrell) served 65 notices; nuisances remedied 65. Smoke observations 7.

Notable sanitary improvements. Conversion of privy middens; improvements to properties, New Street, Hill Lane, and Pleasant View.

Sanitary requirement. Further conversion of privies.

**Brierfield.**—(Area in acres, 807; Estimated Population, 9,100).—*Medical Officer of Health*, J. S. WILSON, M.B.; *Salary*, £50.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·0	*12·8	1·31	0·65	93
1913.....	20·7	14·2	2·15	1·13	147
Mean of 10 years					
1904-1913 .....	21·1	12·9	1·49	1·02	138
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·7	—1·4	—0·84	—0·48	—54
<i>Ten Years' Average</i> .....	—1·1	—0·1	—0·18	—0·37	—45

\* Corrected by "factor" (1·1252)=14·4 per 1,000.

Notification of Births Act in force, and part-time health visitor appointed. Mothers' Welcome and Infant Aid Society established. Weekly lectures given by qualified nurse.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 13 (2 deaths), scarlet fever 19, enteric fever 10, erysipelas 6, pulmonary tuberculosis 18, other

forms of tuberculosis 8. Deaths from non-notifiable diseases: measles 7, whooping cough 2, diarrhoea 1. Measles especially prevalent in February and March, and enteric fever in May. One school closed on account of the former disease. Specimens (blood 18, swabs 1, sputum 4) bacteriologically examined.

*Hospital Accommodation* provided jointly with Burnley Corporation. Cases treated: diphtheria 8, scarlet fever 17, enteric fever 8.

*Disinfection*.—Burnley steam disinfectors available. Houses disinfected 38.

*Water Supply* from Nelson Corporation reservoir. Marsden Height depends on spring water, which is reported good and plentiful.

*Sewage* treated by septic tanks and double contact beds. Marsden Heights without drainage system. Drains flushed periodically.

*Scavenging* by Authority, satisfactory. Nelson Corporation destructor utilised.

*Sanitary Inspection*.—Houses inspected 116, defects remedied 12. Factories and workshops received 64 visits, one defect remedied. Canal boats inspected 5. The Inspector (Mr. Halstead) served 44 notices, nuisances abated 90. Over 1,600 waste-water closets exist; under proposed new bye-laws this type of closet to new houses will be prohibited.

Notable sanitary improvements.

Several private streets paved, sewage works extensions completed.

Sanitary requirements.

Paving, &c., of several streets; draining of houses at Lane Ends.



**Carnforth.**—(Area in acres, 1,505 ; Estimated Population, 3,140).—*Medical Officer of Health*, EDWARD S. JACKSON, M.D. ; *Salary*, £20.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·9	*14·3	0·31	0·63	69
1913.....	18·7	10·1	0·31	0·31	84
Mean of 10 years					
1904-1913 .....	22·6	11·6	0·50	0·65	98
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+4·2	+4·2	nil.	+0·32	—15
<i>Ten Years' Average</i> .....	+0·3	+2·7	—0·19	—0·02	—29

\* Corrected by "factor" (1·0283)=14·7 per 1,000.

*Infectious Diseases.*—Cases notified : pulmonary tuberculosis 3. One death from non-notifiable disease : diarrhœa.

*Hospital Accommodation.*—Iron structure at Crag Bank, contains two wards, each provided with 6 beds.

*Disinfection.*—No proper appliances.

*Water Supply* obtained from Carnforth Water Co.'s reservoir, situate at Withets. Arrangements exist with Manchester Corporation to augment supply in case of necessity.

*Sewage* gravitates to a settling tank, the overflow entering the tidal waters of the River Keer. Periodical flushing of sewers carried out.

*Scavenging* by contract, satisfactory.

*Sanitary Inspection.*—Houses inspected 95. Five privy middens converted to water-carriage system. Houses with privy closets number 242 ; with reference to conversion, the

Medical Officer remarks that "many are entirely outside the sewer area, and as regards the remainder, owing to their situation, it would be a very difficult matter to connect to the sewer." Canal boats examined 6. Factories and workshops received 48 inspections. No notices required for nuisance abatement.

Sanitary requirements.                      Disinfecting appliances; conversion of privy middens.

**Chadderton.**—(Area in acres, 3,082; Estimated Population, 29,512).—*Medical Officer of Health*, JAMES WOOD, M.D., D.P.H.; *Salary*, £250.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate	
1914.....	24.1	*15.1	1.79	1.05	101
1913.....	25.0	13.6	1.57	1.02	116
Mean of 10 years					
1904-1913 .....	26.8	16.8	1.73	1.27	136
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0.9	+1.5	+0.22	+0.03	—15
<i>Ten Years' Average</i> .....	—2.7	—1.7	+0.06	—0.22	—35

\* Corrected by "factor" (1.0874)=16.4 per 1,000.

Notification of Births Act adopted. Two part-time health visitors appointed; 750 visits made.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 25 (2 deaths), scarlet fever 203 (2 deaths), enteric fever 9 (3 deaths), erysipelas 23 (1 death), puerperal fever 2, pulmonary tuberculosis 57, other forms of tuberculosis 18, ophthalmia neonatorum 5. Deaths from non-notifiable diseases: measles 18, whooping cough 8, diarrhoea 20. During year scarlet fever prevalent, the spread of the

disease, as in the previous year, being due to some extent to the mild nature of the attacks. Legal proceedings instituted for wilful exposure in the street whilst suffering from scarlet fever, and a fine of 20s. and costs imposed. Bacteriological examinations made of 35 specimens.

*Hospital Accommodation* for ordinary infectious diseases at Oldham Corporation hospital, Westhulme; for small-pox at Cinder Hill, jointly with Royton, &c. Cases treated: scarlet fever 97 (2 deaths), enteric fever 6 (2 deaths), diphtheria 2 (1 death), puerperal fever 1, measles 1.

*Disinfection*.—For small-pox cases steam apparatus at hospital available. Provision of disinfecting station for district recommended. Houses fumigated 250.

*Water Supply* mainly from Oldham Corporation. Heywood and Middleton Joint Water Board supplies about 250 houses at Middleton Junction.

*Sewage*.—Treatment: precipitation, continuous filtration, and humus tank. About 600 acres sparsely populated, not sewered.

*Scavenging* by Authority, satisfactory. Destructor dealt with 3,595 loads of refuse. Galvanized ashbins provided for new houses.

*Sanitary Inspection*.—Houses inspected 98, unfit for habitation 2, defects remedied at 8. Conversions to fresh-water closets include 41 pail closets and 86 waste-water closets. Condition of schools with regard to cleanliness, unsatisfactory. Alterations effected at certain cowsheds under new regulations, but in many there is yet room for much improvement in lighting, ventilation, drainage, and general cleanliness. Arrangements made for veterinary inspection



of cattle. Unsound food condemned and destroyed 61 lbs. Factories and workshops received 46 visits of inspection. Two canal boats examined. Smoke observations 36 ; legal proceedings taken in one instance. The Inspector (Mr. Ashworth) served 39 statutory and 350 informal notices ; nuisances remedied 285.

Sanitary requirements.

Farm improvements ; paving of yards and passages ; conversion of pail closets and abolition of ash-pits ; provision of disinfecting apparatus.

**Chorley (Borough).**—(Area in acres, 3,614 ; Estimated Population, 31,500).—*Medical Officer of Health*, JAMES A. HARRIS, M.D. (Lond.) ; *Salary*, £120.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	24·0	*15·3	2·38	0·73	149
1913.....	23·7	14·3	1·22	0·77	112
Mean of 10 years					
1904-1913 .....	25·3	15·3	1·37	0·89	145

### *Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+0·3	+1·0	+1·16	—0·04	+37
<i>Ten Years' Average</i> .....	—1·3	nil.	+1·01	—0·16	+4

\* Corrected by " factor " (1·0919)=16·7 per 1,000.

Increase in the epidemic and infant death-rates largely due to an outbreak of measles. Notification of

Births Act adopted and health visitor appointed. Arrangements decided upon for an Ante-Natal Clinic for expectant mothers, and for the establishment of a Baby Clinic for the giving of systematic advice to mothers.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 8 (4 deaths), scarlet fever 82 (5 deaths), enteric fever 11 (3 deaths), erysipelas 10, puerperal fever 2 (both fatal), pulmonary tuberculosis 41, other forms of tuberculosis 8, ophthalmia neonatorum 5. Deaths from non-notifiable diseases: measles 37, whooping cough 5, diarrhœa 21. Ninety-five per cent. of the scarlet fever cases received hospital treatment. Seven of the 11 cases of enteric fever occurred in one house, which was found to be in a very insanitary condition, and it is stated no attempt was made to prevent the spread of the disease. An epidemic of measles occurred in March, necessitating closure of the infant departments of several schools. In July an outbreak of diarrhœa, vomiting, and severe abdominal pain, attributed to milk poisoning, affected a large number of persons in various parts of the town. The milk suspected was supplied from a neighbouring district. Specimens submitted for bacteriological examination: sputum 16, diphtheria 4, enteric fever 2.

*Hospital Accommodation.*—Joint hospital at Heath Charnock—36 beds. Cases treated: diphtheria 3 (1 death), scarlet fever 78 (4 deaths), enteric fever 9 (2 deaths), erysipelas 1. No provision for small-pox, the arrangement whereby 10 beds at Finnington hospital, Blackburn, were reserved for treatment of cases of this disease from the Joint Board's area having been discontinued.

*Disinfection.*—Steam disinfector (Goddard, Massey & Co.) at Town's yard. Houses fumigated 117. Articles disinfected 1,983.

*Water Supply* obtained from Liverpool Corporation.

*Sewage* treated at four disposal works, viz.: Common Bank, Cowling, Botany and Heapey. Treatment by precipitation and filtration at Common Bank and Cowling, and by precipitation and land filtration at Botany and Heapey. Extensions carried out at Cowling works. New sewers laid in several streets.

*Scavenging* by Authority, satisfactory; 7,515 tons of refuse dealt with at destructor.

*Sanitary Inspection*.—Houses inspected under Section 17 of 1909 Act 88, unfit for habitation 79, closing orders 8, demolished 5. Council decided to apply to Local Government Board for authority to prepare a town planning scheme, covering approximately 2,980 acres. Public abattoir provided and extensively used; meat condemned amounted to 3,906 lbs., exclusive of carcasses of 6 cattle slaughtered under the Tuberculosis Order of the Board of Agriculture and Fisheries. Factories and workshops received 56 visits of inspection; 9 defects found and remedied. Closet accommodation chiefly on water-carriage system. The Inspector (Mr. Heap) served 1,898 notices. Smoke observations 30.

Notable sanitary improvements.

Completion of Bolton Road sewerage scheme; enlargement of Cowling sewage works.

Sanitary requirements.

More frequent cleansing of streets; removal of manure receptacles in crowded areas; hospital provision for small-pox cases.



**Church.**—(Area in acres, 529 ; Estimated Population, 7,050).

—*Medical Officer of Health*, JAMES CRAIG, M.B. ; *Salary*, £35.

*Vital Statistics.*

PER 1,000 OF POPULATION.

	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	19.2	*15.6	1.41	0.85	147
1913.....	23.0	13.7	0.85	0.42	80
Mean of 10 years					
1904-1913 .....	22.7	15.5	1.45	0.76	149

*Increase or Decrease*  
*in 1914 on—*

<i>Previous Year</i> .....	—3.8	+1.9	+0.56	+0.43	+67
<i>Ten Years' Average</i> .....	—3.5	+0.1	—0.04	+0.09	—2

\* Corrected by “ factor ” (1.0956)=17.0 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 5, scarlet fever 9, enteric fever 3, erysipelas 4, puerperal fever 2, pulmonary tuberculosis 10, other forms of tuberculosis 5. Deaths from non-notifiable diseases: measles 1, whooping cough 4, diarrhoea 5.

*Hospital Accommodation* for ordinary infectious diseases, nil; for isolation of small-pox cases, arrangement with Blackburn Corporation.

*Disinfection.*—Steam chamber at Oswaldtwistle available. Houses disinfected 24.

*Water Supply* obtained from Accrington, &c., Joint Board. Water rather hard.

*Sewage* treated at Accrington and Church joint outfall works by open septic tanks, sprinkler filters, and sedimentation tanks. Sewer for Dill Hall Lane district completed.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 24; defects, mainly due to dampness, and in some cases want of cleanliness on the part of tenants. Slaughter-houses in “moderate” condition; provision of a public abattoir again recommended. Legal proceedings instituted against a butcher for preparing for sale the carcase of a tuberculous cow, and a fine of £5 and costs imposed. Minor alterations required at some of the dairies and cowsheds. Twenty-two visits of inspection to factories and workshops, 6 defects remedied. Canal boats examined 4. Twelve pail closets converted to water-carriage system. Conversion of closets to fresh-water system, said to have been delayed, owing to excessive charges for water. The Inspector (Mr. Fallowfield) served 95 notices. Smoke observations 8.

Notable sanitary improvement.      Completion of sewer for Dill Hall district.

Sanitary requirements.      Hospital accommodation; public abattoir.

**Clayton-le-Moors.**—(Area in acres, 1,059; Estimated Population, 9,200). — *Medical Officer of Health*, L. TATTERSALL, M.R.C.S.; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·0	*14·6	1·73	0·97	117
1913.....	22·7	15·8	2·19	0·98	169
Mean of 10 years					
1904-1913 .....	25·2	14·5	1·57	0·74	135
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·3	—1·2	—0·46	—0·01	—52
<i>Ten Years' Average</i> .....	—2·2	+0·1	+0·16	+0·23	—18

\* Corrected by “factor” (1·1069)=16·1 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and

membranous croup 25 (2 deaths), scarlet fever 31, enteric fever 4 (1 death), erysipelas 8, pulmonary tuberculosis 20, other forms of tuberculosis 8. Deaths from non-notifiable diseases : measles 5, diarrhœa 8. On account of an epidemic of measles, infant departments of three schools closed.

*Hospital Accommodation* available at Burnley joint hospital for ordinary infectious diseases, and at Accrington for small-pox. Case treated : enteric fever 1.

*Disinfection*.—Accrington steam apparatus available. Houses fumigated 56.

*Water Supply* obtained from Accrington, &c., Joint Board.

*Sewage* treated by continuous precipitation, single contact, and irrigation at Clayton-le-Moors and Great Harwood joint outfall works. Sanction of Local Government Board obtained to new scheme and loan of £14,800.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected 97, unfit for habitation 32. Two back-to-back houses converted to one house. In many instances difficulty experienced in persuading farmers to groom their cows—hindquarters often coated with manure. Factories and workshops received 54 visits of inspection. Closet accommodation almost entirely on waste-water system (1,960 closets). The Inspector (Mr. Dixon) served 74 notices. Smoke observations 20.

Notable sanitary improve- ments.	Paving of streets ; new sewers and surface-water drains laid.
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**Clitheroe (Borough).**—(Area in acres, 2,385 ; Estimated Population, 12,850).—*Medical Officer of Health*, WM. E. BARKER, M.B. ; *Salary*, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·3	*11·8	0·62	0·54	107
1913.....	21·5	16·7	0·85	0·93	97
Mean of 10 years					
1904-1913 .....	22·1	14·1	0·93	0·98	110
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·2	—4·9	—0·23	—0·39	+10
<i>Ten Years' Average</i> .....	—1·8	—2·3	—0·31	—0·44	—3

\* Corrected by "factor" (1·0046)=11·8 per 1,000.

Notification of Births Act in force, and since August, services of whole-time health visitor available. Sub-Committee appointed to consider circular of Local Government Board on maternity and child welfare ; as a result health visitor instructed to visit homes of expectant mothers.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 3 (1 death), scarlet fever 11, enteric fever 3 (1 death), erysipelas 2, puerperal fever 1 (fatal), pulmonary tuberculosis 16, other forms of tuberculosis 6, ophthalmia neonatorum 2. Deaths from non-notifiable diseases : measles 1, diarrhoea 5.

*Hospital Accommodation.*—For small-pox, a wooden erection at Salthill provided jointly with Clitheroe and Bowland Rural Districts. No provision for other infectious diseases.

*Disinfection.*—New steam disinfector (Washington Lyons type) installed on gas works site.

*Water Supply* good, from adjacent upland sources. A few houses in “ Up-Brooks ” district supplied from a well.

*Sewage*.—Treatment: sedimentation, filtration, and broad irrigation. Three new settling tanks came into use during the year, and percolating filters with automatic sprinklers in course of erection. Surface drainage (which is separate from the sewerage system) discharges into Mearly Brook. In Low Moor district, sewers of three entire streets connected to sewerage system.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected under Section 17 of 1909 Act 335, unfit for human habitation 3. There are 229 single and back-to-back houses in the district. Distinct shortage of houses, at rentals of 5s. to 6s. per week. An enquiry in regard to the borrowing of £7,000 for erection of 50 houses under Part III. of the Housing of the Working Classes Act, 1890, arranged to be held in March, 1914, was postponed. To factories and workshops 215 visits of inspection. Dairy and cowshed regulations only partially enforced. In addition to public abattoirs, there are 5 registered slaughter-houses. Arrangements made for closing one private slaughter-house. Bakehouses, as regards cleanliness, satisfactory. Two privies and 95 pail closets converted to water closets; 1,517 waste-water closets exist. Mr. Bolton (Inspector) served 214 notices; nuisances abated 210. Smoke observations 49.

Notable sanitary improvements.	Steam disinfectors; extension of sewerage system; improved housing accommodation.
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Sanitary requirements.	Conversion of back-to-back houses; refuse destructor; infectious diseases hospital; erection of additional houses.
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**Colne (Borough).** — (Area in acres, 5,063 ; Estimated Population, 27,404).—*Medical Officer of Health*, WILLIAM DOYLE, M.B., C.M. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17·8	*13·7	1·31	0·91	116
1913.....	20·0	13·4	1·51	0·73	101
Mean of 10 years					
1904-1913 .....	22·1	13·8	1·65	0·93	138

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—2·2	+0·3	—0·20	+0·18	+15
<i>Ten Years' Average</i> .....	—4·3	—0·1	—0·34	—0·02	—22

\* Corrected by "factor" (1·1004)=15·0 per 1,000.

Notification of Births Act in force ; health visitor made 3,142 visits. The practice of notifying parents of newly-born infants that, in case of sickness, the voluntary services of the health nurse are available has had very gratifying results.

*Infectious Diseases.*—Cases notified : small-pox 1, diphtheria and membranous croup 15 (1 death), scarlet fever 51, enteric fever 33 (3 deaths), erysipelas 22 (1 death), puerperal fever 1 death (case not notified), pulmonary tuberculosis 49, other forms of tuberculosis 18, ophthalmia neonatorum 6. Deaths from non-notifiable diseases : measles 8, whooping cough 4, diarrhoea 20. Enteric fever broke out at the end of February in Cottontree district, the water supply from a well outside the Borough being suspected as the cause ; 55



houses in Colne supplied with this water were subsequently connected to the Borough supply. A special report on this outbreak was prepared by Dr. Doyle. Forty specimens—enteric fever, diphtheria, and sputum—submitted for bacteriological examination.

*Hospital Accommodation.*—For small-pox a hospital, with 20 beds, provided on Jerusalem Farm, and for the treatment of other infectious diseases temporary provision made. Cases treated : small-pox 1, enteric fever 1.

*Disinfection.*—No proper apparatus. Houses fumigated 69.

*Water Supply* good, obtained mainly from Laneshaw reservoir and springs.

*Sewage.*—Treatment : (a) septic tanks and double contact beds ; (b) septic tanks and irrigation.

*Scavenging by Authority.* Refuse destructor provided ; 4,757 tons of refuse dealt with.

*Sanitary Inspection.*—Houses inspected under Housing Acts 988 ; no closing orders made ; defects remedied 521. There are 4,445 waste-water closets—an increase of 130 over last year,—470 pail closets, and 237 tank closets ; commencement shortly to be made with the conversion of the latter. Public abattoir provided. Unsound food condemned : carcasses of 2 beasts and 1 sheep, internal organs of 1 beast, 126 lbs. fish, 8 quarts shrimps. Veterinary inspection of cows arranged for. The Inspector (Mr. Sugden) served 357 notices ; nuisances abated 342, legal proceedings taken in three cases.

Sanitary requirement.

Conversion of pail closets.

**Crompton.**—(Area in acres, 2,865 ; Estimated Population, 15,300).—*Medical Officer of Health*, to May 17th, WILLIAM BROOKE, M.A., M.D. ; from May 18th, MALCOLM HUTTON, M.A., M.B., D.P.H. ; *Salary*, £70.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·4	*15·0	1·37	1·04	127
1913.....	23·4	16·9	2·86	1·20	136
Mean of 10 years					
1904-1913 .....	22·2	15·7	1·55	0·89	140

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—4·0	—1·9	—1·49	—0·16	—9
<i>Ten Years' Average</i> .....	—2·8	—0·7	—0·18	+0·15	—13

\* Corrected by “ factor ” (1·1075)=16·6 per 1,000.

Notification of Births Act adopted. Visits made by health visitor to houses where births had recently taken place 872.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 15 (3 deaths), scarlet fever 92 (10 deaths), erysipelas 16, puerperal fever 1, pulmonary tuberculosis 28, other forms of tuberculosis 10, ophthalmia neonatorum 3. Deaths from non-notifiable diseases: whooping cough 1, diarrhoea 7. Severe type of scarlet fever prevalent during March and April, and also November and December. Specimens submitted for bacteriological examination: blood 2, swabs 16, sputum 13.

*Hospital Accommodation.*—For small-pox 24 beds provided at Cinder Hill jointly with Chadderton and Royton.

A fee of £2 2s. per week per patient paid for accommodation for ordinary infectious diseases at Westhulme hospital belonging to Oldham Corporation. Cases treated : diphtheria 6 (2 deaths), scarlet fever 52 (8 deaths).

*Disinfection.*—Steam disinfector (Thresh's) at Town Hall yard. Houses disinfected 114.

*Water Supply* from Oldham Corporation. A few outlying farms and houses supplied from wells and springs.

*Sewage.*—Treatment by precipitation, bacteria beds, and filtration. With the exception of outlying farms, the whole district is sewered.

*Scavenging* by Authority, satisfactory. Destructor, now in course of erection, expected to be available at the end of 1915.

*Sanitary Inspection.*—Houses inspected 811, unfit for habitation 3, defects remedied without closing orders 183, after closing orders 13, houses demolished 3. A number of back-to-back houses made into through houses. New houses built 20, in course of erection 46 ; houses still difficult to obtain. Food destroyed : parts of two carcases. Factories and workshops received 249 visits, 6 defects found, 3 remedied. Thirty-five privy middens and 2,598 pail closets still exist ; 1 privy midden converted to pail closet ; 5 pail closets displaced by water closets. The Inspector (Mr. Cook) served 192 preliminary and 15 statutory notices ; nuisances remedied 809. Smoke observations 12.

Notable sanitary improvements.	Water supply at Grains Bar ; paving and sewerage streets and back passages.
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Sanitary requirements.	Conversion of pail closets to water-carriage system.
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**Croston.**—(Area in acres, 2,347; Estimated Population, 2,055).—*Medical Officer of Health*, ALFRED DUCKWORTH, L.R.C.P.E.; *Salary*, £20.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·9	*10·2	0·97	nil.	46
1913.....	18·0	15·1	nil.	1·46	135
Mean of 10 years					
1904-1913 .....	20·1	12·7	0·99	1·03	103
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+2·9	—4·9	+0·97	—1·46	—89
<i>Ten Years' Average</i> .....	+0·8	—2·5	—0·02	—1·03	—57

\* Corrected by "factor" ( $\cdot 9598$ ) = 9·7 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria 2, scarlet fever 4, enteric fever 1, erysipelas 5, puerperal fever 1 (fatal). Deaths from non-notifiable disease : diarrhœa 2. Measles prevalent in early part of year, and school closure resorted to ; apathy on the part of parents assisted in the spread of the disease.

*Hospital Accommodation.*—By agreement, cases admitted to the West Lancashire Rural District Council's hospital at Aughton. Cases treated : scarlet fever 2, enteric fever 1. No accommodation for small-pox.

*Disinfection.*—Steam apparatus at hospital used for bedding, &c. Houses disinfected 20.

*Water Supply* derived mainly from Manchester (Thirlmere) main, but a number of houses supplied from wells and springs.

*Sewage* —Treatment : chemical precipitation, and land irrigation. Scheme prepared for sewerage Grape Lane and

Drinkhouse Lane districts, but in abeyance at present. River Yarrow again a source of considerable nuisance.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Housing accommodation reported as sufficient, but a recent inspection by the County Authority revealed many unsatisfactory housing features. Houses inspected under Section 17 of 1909 Act 49. At dairies and cowsheds many defective conditions exist, such as insufficient lighting and ventilation, and defective paving and draining. To factories and workshops 12 visits paid. Privy middens number 292, only 8 conversions took place, and these to pail closets. The Inspector (Mr. Hogben) served 16 notices.

Sanitary requirements.	Attention to housing ; enforcement of cowshed regulations ; completion of sewerage system.
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**Dalton-in-Furness.** — (Area in acres, 7,990 ; Estimated Population, 13,500).—*Medical Officer of Health*, G. H. PATTERSON, M.R.C.S., D.P.H. ; *Salary*, £115.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·8	*13·5	1·62	1·11	111
1913.....	26·5	11·5	0·90	0·82	59
Mean of 10 years					
1904-1913 .....	25·7	14·4	1·33	1·20	115
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—2·7	+2·0	+0·72	+0·29	+52
<i>Ten Years' Average</i> .....	—1·9	—0·9	+0·29	—0·09	—4

\* Corrected by " factor " ( $\cdot 9033$ ) = 12·1 per 1,000.

Infant mortality nearly double last year's rate ; ignorance

and carelessness in feeding, coupled with exposure to risks of infection from such diseases as measles and whooping cough responsible for many deaths.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 15 (1 death), scarlet fever 58 (1 death), enteric fever 1, erysipelas 9 (1 death), pulmonary tuberculosis 9, other forms of tuberculosis 1, ophthalmia neonatorum 4. Deaths from non-notifiable diseases: measles 5, whooping cough 14, diarrhoea 1. Severe epidemic of scarlet fever in Askam, necessitated closure of schools for a month. Measles extensively prevalent at Dalton and Lindal; infant schools closed. Bacteriological examinations 14.

*Hospital Accommodation* provided at High Carley, jointly with Ulverston, &c. For small-pox an arrangement exists with Barrow Corporation. Cases treated: diphtheria 9, scarlet fever 48 (1 death), enteric fever 1.

*Disinfection.*—No apparatus. Houses disinfected 83.

*Water Supply* obtained mainly from Barrow Corporation. Great improvement effected in the supply by relaying or cleansing of corroded or partially blocked mains and subsidiary mains. Question of supplying cottages at Dendron Road, Green Lane, Tithebarn, Minnikin Hall, and Longlands “still under consideration.”

*Sewage.*—Newton outfall works—plans prepared and land purchased for new filter tanks, &c. Ireleth—new 9-inch sewer to be constructed for part of village. Askam—owing to silting up of the outfall of the Lots sewer, relaying necessary; construction of a small septic tank would improve the quality of the effluent.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses specially inspected 218; found unfit for habitation 23. Slaughter-houses, both



structurally and as regards position, unsatisfactory ; complaints respecting delay in removal of offal. Unsound food seized, 1,850 lbs. Many cowsheds so defective “ that nothing short of reconstruction would place them in a condition to fulfil modern requirements.” Factories and workshops received 183 visits of inspection. Privies converted to water closets 97 ; 572 remain. The Inspector (Mr. Caine) reports on 110 nuisances dealt with.

Sanitary requirements.                      Disinfecting appliances ; new  
outfall sewer for Newton.

**Darwen (Borough).** — (Area in acres, 5,959 ; Estimated Population, 41,038).—*Medical Officer of Health*, F. G. HAWORTH, M.B., C.M., D.P.H. ; *Salary*, £250.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·6	*14·4	0·87	0·70	118
1913.....	18·0	14·1	0·66	0·78	127
Mean of 10 years					
1904-1913 .....	19·3	13·9	1·12	0·74	132
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+0·6	+0·3	+0·21	—0·08	—9
<i>Ten Years' Average</i> .....	—0·7	+0·5	—0·25	—0·04	—14

\* Corrected by “ factor ” (1·1206)=16·1 per 1,000.

Notification of Births Act in force and health visitor appointed. Mothers' Club formed ; average attendance 44 ; lessons given in home and personal hygiene, and on the care of mothers and infants ; advice given on feeding of young children ; infants weighed.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 20 (4 deaths), scarlet fever 206 (1 death),

enteric fever 10 (5 deaths), erysipelas 27 (1 death), puerperal fever 1, pulmonary tuberculosis 64, other forms of tuberculosis 24, ophthalmia neonatorum 4. Deaths from non-notifiable diseases : measles 2, whooping cough 6, diarrhoea 18. Infant department of one school closed on account of measles. Bacteriological examinations : swabs 14, blood 8, sputum 122.

*Hospital Accommodation.*—For small-pox, a converted farmhouse, containing 2 beds, available. Hospital at Bull Hill in two blocks, one containing 20 beds for scarlet fever, and the other 8 beds for enteric fever. Cases treated : scarlet fever 89.

*Disinfection.*—Washington Lyons' superheated steam disinfector at Bull Hill hospital. Houses disinfected 213.

*Water Supply.*—Upland surface water, stored at Sunnyhurst Hey and Earnsdale reservoirs.

*Sewage.*—Treatment : main works, septic tanks, sprinkler filter-beds, and land filtration. At Hoddlesden works : precipitation and filtration. Combined system of drainage ; periodical flushing carried out.

*Scavenging by Authority*, satisfactory. Meldrum refuse destructor in operation.

*Sanitary Inspection.*—Houses inspected 35, unfit for habitation 8, demolished 8 (6 being back-to-back). Need for houses with more bedroom accommodation. Animals slaughtered at public abattoirs 11,021 ; condemned as unfit for food : 4 beasts, 1 calf, 10 sheep, 2 swine, and 2 deer. Special instructions issued to cowkeepers *re* cleanliness of cowsheds, &c. The work of converting pail closets to water closets continues, 1,856 dealt with during the year ; Council contributes half-cost. Factories and workshops received 473 visits of inspection ; 39 defects remedied. The Inspectors (Messrs. Marsden and Walsh) served 2,355 notices ; nuisances

remedied 2,410; legal proceedings instituted 8. Smoke observations 167; police court actions taken in 5 cases, fines imposed in 2 instances. Meteorological statistics appended to report.

Notable sanitary improvement.      Conversion of pail closets to water-carriage system.

Sanitary requirement.      Disinfector, centrally situated.

**Denton.**—(Area in acres, 2,594; Estimated Population, 17,344).—*Medical Officer of Health*, WM. STEWART, M.D.; *Salary*, £40 (no claim).

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	21.1	*12.9	1.26	0.98	120
1913.....	20.8	14.6	0.81	1.22	144
Mean of 10 years					
1904-1913 .....	23.4	14.5	1.24	0.89	137
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0.3	—1.7	+0.45	—0.24	—24
<i>Ten Years' Average</i> .....	—2.3	—1.6	+0.02	+0.09	—17

\* Corrected by "factor" (1.0659)=13.7 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 19 (1 death), scarlet fever 192 (7 deaths), enteric fever 1 (fatal), continued fever 2, erysipelas 8, poliomyelitis 2, pulmonary tuberculosis 21, other forms of tuberculosis 11, ophthalmia neonatorum 6. Deaths from non-notifiable diseases: measles 2, whooping cough 3, diarrhoea 8. Number of cases of infectious diseases notified, highest on record. Specimens submitted for bacteriological examination: diphtheria 5, sputum 26.



*Hospital Accommodation.*—Two beds available for small-pox and four for other infectious diseases at Hyde Corporation hospitals. Cases treated: diphtheria 1, scarlet fever 38 (5 deaths).

*Disinfection.*—No proper apparatus; 192 houses disinfected.

*Water Supply,* good and unlimited in amount, from Manchester Corporation water mains.

*Sewage.*—Treatment: chemical precipitation, contact beds, and land filtration. Mechanical plant has superseded sludge lagoons. Construction of Thornley Lane sewer proceeding satisfactorily. Two automatic flushing chambers fixed.

*Scavenging by Authority.* Dr. Stewart considers the present system of tipping will ultimately result in danger to health, and urges the necessity of a destructor to thoroughly dispose of all organic matter.

*Sanitary Inspection.*—Houses inspected 35, defects remedied 17. Food destroyed: 3 carcasses of cows, 2 sets of pig's organs, 33 herrings, 132 lbs. fruit and vegetables, &c. A cow at Henfold Farm was found to have died from anthrax, and the butcher who dressed the carcase developed the disease, but recovered after treatment at the Royal Infirmary, Manchester; stringent precautions taken at the farm against the spread of the disease. Factories and workshops inspected 206, defects remedied 4. Privy middens converted to water closets 159, pails to water closets 12. Mr. Brocklehurst (Inspector) served 162 preliminary and 29 statutory notices; nuisances abated 1,188.

Notable sanitary improvements.	Conversions to water closets; remodelling of sewage works.
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Sanitary requirements.	Steam disinfectors; refuse destructor; paving of back passages.
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**Droylsden.**—(Area in acres, 1,009 ; Estimated Population, 13,900).—*Medical Officer of Health*, F. G. PELL-ILDERTON, M.B. ; *Salary*, £72.

*Vital Statistics.*

PER 1,000 OF POPULATION.

	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	23·8	*14·3	1·94	1·07	120
1913.....	22·2	13·5	1·38	0·65	118
Mean of 10 years					
1904-1913 .....	26·7	15·8	2·01	1·11	144

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+1·6	+0·8	+0·56	+0·42	+2
<i>Ten Years' Average</i> .....	—2·9	—1·5	—0·07	—0·04	—24

\* Corrected by " factor " (1·0881)=15·9 per 1,000.

The question of adopting the Notification of Births Act, 1907, again been discussed by Council, but the time is not considered opportune for proceeding further with the matter. School for Mothers, or Infants' Welfare Centre, promoted by a voluntary organisation, opened early in 1915.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 9 (1 death), scarlet fever 81 (4 deaths), enteric fever 5 (2 deaths), erysipelas 14 (1 death), puerperal fever 2, poliomyelitis 1, pulmonary tuberculosis 41, other forms of tuberculosis 22, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: measles 5, whooping cough 3, diarrhoea 12. Scarlet fever present throughout the year.

*Hospital Accommodation.*—Six beds reserved at Hyde hospital (one for small-pox and five for other diseases), at an

annual retaining fee of £66. Cases treated : scarlet fever 20, enteric fever 2 (1 death).

*Disinfection.*—Manlove and Alliott steam disinfectors in use at destructor works. Houses disinfected 140.

*Water Supply* obtained from Manchester Corporation.

*Sewage.*—Treatment : catchpits, sedimentation tanks, bacterial filters, and storm-water tanks. Drainage : combined system ; large number of drains require relaying. Water test applied to new drains.

*Scavenging* satisfactorily performed by Authority. Destructor provided.

*Sanitary Inspection.*—Houses inspected 286, unfit for habitation 2, one closing order made ; defects remedied without closing orders 14. Factories and workshops received 87 inspections ; 12 contraventions dealt with. Privy middens converted to water closets 191, to pails 2. Mr. Schofield (Inspector) served 135 notices ; nuisances abated 962 ; legal proceedings instituted in one case. Smoke observations 331.

Notable sanitary improvements.

Conversion of privy middens to water closets ; paving of private streets.

Sanitary requirements.

Further conversion of privies ; provision of new combined drains ; paving of back passages ; improvement of public urinals ; improved type of cast-iron manhole covers in proximity to houses.



**Eccles (Borough).** — (Area in acres, 2,057 ; Estimated Population, 43,300).—*Medical Officer of Health*, W. M. HAMILTON, M.D., D.P.H. ; *Salary*, £200.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	21·6	*13·0	0·99	1·08	105
1913.....	22·5	12·9	1·53	0·79	96
Mean of 10 years					
1904-1913 .....	24·5	13·7	1·37	0·95	116
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·9	+0·1	—0·54	+0·29	+9
<i>Ten Years' Average</i> .....	—2·9	—0·7	—0·38	+0·13	—11

\* Corrected by “ factor ” (1·0766)=13·9 per 1,000.

Notification of Births Act in operation. “ Ladies’ Health Society ” supervises the work of two visitors, who paid 15,088 visits during the year.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 64 (7 deaths), scarlet fever 249 (1 death), enteric fever 8 (3 deaths), erysipelas 26 (2 deaths), puerperal fever 3, cerebro-spinal meningitis 1, pulmonary tuberculosis 129, other forms of tuberculosis 40, ophthalmia neonatorum 7. Deaths from non-notifiable diseases: whooping cough 9, diarrhoea 23. Scarlet fever prevalent throughout the year. Prosecution instituted for exposure of a person suffering from scarlet fever, and a fine of 20s. and costs imposed. Specimens submitted for bacteriological examination: blood 19, swabs 65, sputum 86.

*Hospital Accommodation.*—Twenty-six beds reserved at Salford Corporation hospitals—6 at Drinkwater Park hospital for small-pox, and 20 at Ladywell sanatorium for other diseases. Cases treated: diphtheria 37 (4 deaths), scarlet fever 63 (1 death), enteric fever 8 (2 deaths), puerperal fever 2.

*Disinfection.*—Steam disinfectors (Manlove and Alliott's) provided at sewage works. Three hundred and forty-four parcels of bedding disinfected. Rooms fumigated 773.

*Water Supply* obtained from Manchester Corporation.

*Sewage* treated by precipitation tanks, single contact beds, storm filters, continuous filtration, and land. Extensions carried out during year. Smoke test applied to house drains on 372 occasions.

*Scavenging* by Authority, satisfactory; 8,661 tons of refuse taken to destructor.

*Sanitary Inspection.* — Houses inspected under 1909 Act 595; many defects remedied. Further progress made with scheme for dealing with South-East Eccles area, several lots of property purchased, and three lots of previously "closed" houses demolished. Considerable shortage of houses for working classes said to exist. Forty-five cases of overcrowding recorded: in one instance legal proceedings taken and defendant ordered to pay costs. Carcase of a tuberculous pig, and several lots of offal submitted for inspection, and subsequently surrendered for destruction. Proceedings instituted in a case of exposure for sale of unsound poultry, and a fine of £3 and costs inflicted. Veterinary inspection of cows carried out bi-monthly. Canal boats inspected 102, workshops 760, visits under Shops Act 852. Privy middens converted to water closets 8; only 20 remain to be dealt with. Two ranges of trough closets and one range of latrines at two elementary schools, substituted by pedestal water closets, separately flushed. The Inspector (Mr. Laskey) reports in detail on a large number of nuisances remedied. Smoke observations 38; in two cases proceedings taken in respect of excessive emissions.

Notable sanitary improvement.

Sanitary requirement.

Repairs to houses under Housing, Town Planning, &c., Act.

Additional housing accommodation.

**Failsworth.**—(Area in acres, 1,072 ; Estimated Population, 16,600).—*Medical Officer of Health*, GEORGE ELLIS, L.R.C.P. ; *Salary*, £80.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·2	*15·1	2·28	1·14	121
1913.....	24·6	14·2	1·40	1·09	108
Mean of 10 years					
1904-1913 .....	27·0	15·4	1·44	1·19	135
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+2·6	+0·9	+0·88	+0·05	+13
<i>Ten Years' Average</i> .....	+0·2	—0·3	+0·84	—0·05	—14

\* Corrected by “ factor ” (1·1011)=16·6 per 1,000.

Notification of Births Act operative, and health visitor at work. Number of breast-fed children increasing. Dr. Ellis urges Council to consider additional steps for reduction of infant mortality, including action regarding welfare of mothers and expectant mothers.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 20 (5 deaths), scarlet fever 141 (6 deaths), enteric fever 1 (fatal), erysipelas 11 (1 death), puerperal fever 4, poliomyelitis 1, pulmonary tuberculosis 54, other forms of tuberculosis 15, ophthalmia neonatorum 7. Deaths from non-notifiable diseases : measles 9, whooping cough 5, diarrhœa 12. Scarlet fever notifications more numerous than for many years ; probably many children who were affected with “ sore throat ” were really suffering from a mild form of scarlet fever. Bacteriological examinations 27.

*Hospital Accommodation.*—Oldham Corporation hospitals available ; fee, two guineas per week per patient. Cases treated : diphtheria 1 (fatal), scarlet fever 22 (2 deaths).



*Disinfection.*—Oldham steam apparatus available. Dr. Ellis urges the provision of efficient disinfecting apparatus in the district. Rooms disinfected 192 ; all schools fumigated.

*Water Supply* obtained mainly from Oldham Corporation ; 113 houses in outlying parts supplied by Manchester.

*Sewage.*—Treatment : detritus and settling tanks, continuous filters, humus tanks, and straining filters. Sewers periodically flushed by water carts.

*Scavenging by Authority.* The method of refuse disposal (on tips) is “not sanitary” ; an up-to-date destructor recommended. Council purchased a site on which such plant could be erected.

*Sanitary Inspection.*—Houses inspected 188, unfit for habitation 10, closing orders 5, defects remedied at 110 houses without making closing orders, houses demolished 13. Much old property exists. Many streets and back passages not properly made ; condition most unsatisfactory, especially in wet weather. Cowsheds “fair” ; in some instances defects exist, such as bad floors, insufficient means of lighting and ventilation, and defective yard surfaces. Stables, on a special inspection, showed much need for improvement, the majority being without manure receptacles, and many without sufficient means of drainage. Notices served under Council’s bye-laws resulted in considerable improvement. Visits to factories and workshops 115, defects found and remedied 32. During year 71 pail closets and 91 privies converted ; 136 of the latter and 1,097 of the former remain. Council contributed £463 towards cost of conversions mentioned. The Inspector (Mr. Rutter) served 468 preliminary and 554 statutory notices ; nuisances remedied 1,135. Smoke observations 24.

Notable sanitary improvements.      Conversion of pail and privy closets ; defective sewers relayed.

Sanitary requirements.      Further conversions of pail and privy closets ; refuse destructor ; steam disinfectors ; paving of streets and passages.

**Farnworth.**—(Area in acres, 1,504 ; Estimated Population, 29,000).—*Medical Officer of Health*, ALFRED KERSHAW, M.D. ; *Salary*, £100.

### *Vital Statistics.*

#### PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	23·1	*14·3	2·03	0·79	122
1913.....	22·4	15·0	3·48	0·58	215
Mean of 10 years					
1904-1913 .....	25·6	15·9	2·84	0·96	187
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+0·7	—0·7	—1·45	+0·21	—93
<i>Ten Years' Average</i> .....	—2·5	—1·6	—0·81	—0·17	—65

\* Corrected by " factor " (1·0926)=15·6 per 1,000.

The fall in the infant death-rate, as compared with 1913, is the most satisfactory feature of the statistics for the year under report. Notification of Births Act in force. Two whole-time health visitors appointed. Over 3,500 visits paid. "Mothers' Welcome" meetings discontinued, and "Consultation Afternoons" substituted. Since the commencement of the war, many coupons for milk, and considerable quantities of dried milk and cocoa distributed.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 4 (3 deaths), scarlet fever 107 (6 deaths), enteric fever 13 (2 deaths), erysipelas 10, puerperal fever 4, pulmonary tuberculosis 38, other forms of tuberculosis 16, ophthalmia neonatorum 6. Deaths from non-notifiable diseases: measles 15, whooping cough 6, diarrhoea 27. Eighty-seven per cent. of the scarlet fever cases received hospital treatment. Specimens submitted for bacteriological examination 156.

*Hospital Accommodation.*—For small-pox, arrangement with Bury Joint Hospital Board; for other diseases, hospital provided jointly with Little Hulton and Little Lever. Cases treated: diphtheria 3 (2 deaths), scarlet fever 96 (6 deaths), enteric fever 12.

*Disinfection.*—Steam apparatus at hospital; 1,207 articles of bedding, &c., disinfected. Rooms fumigated 280.

*Water Supply* obtained from Bolton Corporation.

*Sewage.*—Treatment: Hall Lane works, sedimentation tanks, storm tanks, and continuous filtration; Larkhill works, sedimentation tanks, storm filter, continuous filtration, and land. Smoke test applied to drains, and sewers periodically flushed.

*Scavenging* by Authority, satisfactory. Refuse destructor provided.

*Sanitary Inspection.*—Houses inspected 112, unfit for habitation and closing orders made 71, subsequently made habitable 15, one house demolished; in the remaining cases the necessary improvements in progress. Visits to factories and workshops 157, slaughter-houses 83, dairies and cowsheds 54. Privy middens converted to water closets 331; about 3,019 still remain. Council contribute 30s. per closet towards cost of conversion. The Inspector (Mr. Marshall) served 73 preliminary and 32 statutory notices, and paid 1,842



visits to supervise work in progress. In 8 instances legal proceedings authorised, but on persons responsible receiving intimation of the intended action, requirements of the Council proceeded with. Smoke observations 12.

Notable sanitary improvements.	Conversion of privies ; reconstruction of drains ; paving of streets.
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Sanitary requirements.	Further conversion of privies ; appointment of Assistant Sanitary Inspector.
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**Fleetwood.**—(Area in acres, 2,510 ; Estimated Population, 18,075).—*Medical Officer of Health*, DAVID M. GILL, M.B. ; *Salary*, £100 (including £25 for the Port).

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	26·8	*12·1	0·71	1·05	98
1913.....	25·0	13·8	1·52	1·01	106
Mean of 10 years					
1904-1913 .....	29·2	13·3	1·62	0·68	118

### *Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	+1·8	—1·7	—0·81	+0·04	—8
<i>Ten Years' Average</i> .....	—2·4	—1·2	—0·91	+0·37	—20

\* Corrected by " factor " (1·0698)=12·9 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 25 (3 deaths), scarlet fever 54, enteric fever 1, erysipelas 20, puerperal fever 1 (fatal), pulmonary tuberculosis 28, other forms of tuberculosis 7, ophthalmia neonatorum 8. Deaths from non-notifiable diseases : measles 1, whooping cough 5, diarrhœa 4.

*Hospital Accommodation* provided for ordinary infectious diseases by the Fylde Joint Committee at Moss Side, and for small-pox by the Fylde, Preston, and Garstang Joint Board at Elswick. Cases treated : diphtheria 15, scarlet fever 43.

*Disinfection*.—Steam apparatus (Goddard, Massey, &c.) at Town's yard ; 670 articles disinfected. Houses fumigated 142.

*Water Supply* obtained from Fylde Water Board's Grizedale reservoir.

*Sewage* pumped into storage tank, and discharged untreated into sea at low water. Sewers regularly flushed.

*Scavenging* by Authority, satisfactory. Refuse destructor in operation.

*Sanitary Inspection*.—Houses inspected 172, defects remedied at 102. Public abattoir provided ; the diseased organs of a large number of beasts, sheep, &c., condemned and destroyed. Sixty-two defects noted on 144 visits to factories. Excepting 36 pail closets, water-carriage system in vogue. The Inspector (Mr. Bailey) served 427 notices ; nuisances remedied 407. Smoke observations 14.

Notable sanitary improvement.	Draining and paving of streets.
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Sanitary requirements.	Formation and draining of new streets ; suitable sanitary conveniences at Wyre Docks.
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*Port*.—Vessels inspected 578, of which 176 were found insanitary. In each instance informal notice served. A case of scarlet fever occurred on one ship. Visits of inspection to fish-curing houses numbered 81, defects remedied 14. As a result of examinations of other dock premises, 93 nuisances abated. Sanitary conveniences now being provided at new fish dock. Approximately 115 tons of fish forfeited and destroyed.

**Formby.**—(Area in acres, 5,613; Estimated Population, 5,950).—*Medical Officer of Health*, FRANCIS CARTER, L.R.C.P.; *Salary*, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·8	*10·9	0·67	0·50	26
1913.....	18·8	7·5	1·17	0·16	89
Mean of 9 years					
1905-1913 .....	18·1	9·3	0·61	0·72	69

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	nil.	+3·4	—0·50	+0·34	—63
<i>Nine Years' Average</i> .....	+0·7	+1·6	+0·06	—0·22	—43

\* Corrected by "factor" (1·0173)=11·0 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 5, scarlet fever 8, enteric fever 2, pulmonary tuberculosis 7, other forms of tuberculosis 1. Deaths from non-notifiable disease: diarrhoea 4. Bacteriological examinations 36.

*Hospital Accommodation.*—Arrangements with Bootle Corporation. Two cases of scarlet fever treated.

*Disinfection.*—Steam apparatus at hospital.

*Water Supply* of good quality, but very hard, obtained from Southport Water Board.

*Sewage* treated in septic tanks, effluent discharged into sea.

*Scavenging* partly by Authority and partly by contractors, satisfactory.



*Sanitary Inspection.*—Houses inspected 36 ; defects remedied or receiving attention 89. Dairies and cowsheds kept in cleanly condition. Factories and workshops received 60 visits ; defects remedied 2. No conversions of privies to water closets, and only two converted to pail closets ; there are 212 privy middens and 324 pail closets in the district. The Inspector (Mr. Grime) served 310 notices ; nuisances remedied 302. Smoke observations 3.

Notable sanitary improvement.      House drains connected to sewer.

Sanitary requirements.      Conversion of privy and pail closets.

**Fulwood.**—(Area in acres, 2,116 ; Estimated Population, excluding Workhouse, 6,336.)—*Medical Officer of Health*, JOHN GARTH, L.R.C.P.I. ; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	13·4	*11·9	0·47	0·31	58
1913.....	16·0	14·5	0·41	0·83	77
Mean of 10 years					
1904-1913 .....	17·3	10·5	0·64	0·46	60

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—2·6	—2·6	+0·06	—0·52	—19
<i>Ten Years' Average</i> .....	—3·9	+1·4	—0·17	—0·15	—2

\* Corrected by “ factor ” (1·0942)=13·0 per 1,000.

In accordance with the instructions of the Registrar-General, the births and deaths occurring in such Institutions

as the Poor Law Schools, Convent, &c., and also in the Military Barracks, are taken into account in the statistics for the year 1914. In previous year the population, and births and deaths in these places excluded from the local statistics.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 6 (1 death), scarlet fever 60 (1 death), enteric fever 2, erysipelas 10, puerperal fever 2, pulmonary tuberculosis 10, other forms of tuberculosis 2, ophthalmia neonatorum 1. Death from non-notifiable disease : diarrhoea 1.

*Hospital Accommodation* for small-pox provided at Elswick ; ordinary infectious diseases isolated at Preston, Fulwood, and Longridge joint hospital, situated in the district. Cases treated : diphtheria 2 (1 death), scarlet fever 30 (1 death).

*Disinfection.*—Steam apparatus at hospital. Houses disinfected 45.

*Water Supply*, of good quality, obtained from Council's own reservoirs at Bleasdale Fells ; augmentation of supply recommended.

*Sewage.*—Treatment : septic tanks and land filtration.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.* — Houses inspected 150. Certain cowsheds insufficiently ventilated, and others not satisfactory as regards cleanliness. Insanitary conditions at Cadley School reported last year have not yet received attention. One privy midden converted to water-carriage system ; 32 remain. Smoke observations 9.

Sanitary requirements.

Additional water supply ; relaying of old sewers ; attention to cowsheds.

**Golborne.**—(Area in acres, 1,679 ; Estimated Population, 7,250).—*Medical Officer of Health*, JAMES DOBB, L.R.C.P. ; *Salary*, £45.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	30·3	*11·1	1·37	0·27	104
1913.....	31·7	13·5	2·48	0·55	143
Mean of 10 years					
1904-1913 .....	31·0	16·5	3·32	0·66	162
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·4	—2·4	—1·11	—0·28	—39
<i>Ten Years' Average</i> .....	—0·7	—5·4	—1·95	—0·39	—58

\* Corrected by " factor " (1·0549)=11·7 per 1,000.

During year Notification of Births Act put into operation ; health visitor appointed jointly with Haydock.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 2, scarlet fever 7, enteric fever 6 (2 deaths), erysipelas 14, pulmonary tuberculosis 8, other forms of tuberculosis 8, ophthalmia neonatorum 2. Deaths from non-notifiable diseases : whooping cough 2, diarrhoea 6. Specimens submitted for bacteriological examination : diphtheria 4, enteric fever 8, sputum 1.

*Hospital Accommodation* provided jointly with Leigh, &c., at Astley. Cases treated : diphtheria 1, scarlet fever 1, enteric fever 6 (1 death).

*Disinfection.*—No apparatus provided. Clothing of patients removed to hospital, disinfected at that Institution. Houses fumigated 15.

*Water Supply* obtained from Ince-in-Makerfield Urban District Council, whose works are situated in this district.



*Sewage* treated on bacteria beds. Flushing and testing of drains carried out as required.

*Scavenging* by Authority, satisfactory. Refuse chiefly disposed of to farmers.

*Sanitary Inspection*.—Several visits of inspection made by Housing Committee during year; defects discovered at 46 dwelling-houses, practically all of which have been remedied. Factories and workshops received 47 inspections. Conversions of privy middens to water-carriage system numbered 47; over 500 remain. The Inspector (Mr. Pasquill) served 86 notices; nuisances remedied 76. Smoke observations 22.

Sanitary requirements.                      Disinfecting appliances; abolition of privy middens.

**Grange-over-Sands.** — (Area in acres, 1,862; Estimated Population, 2,250).— *Medical Officer of Health*, GEORGE H. PATTERSON, M.R.C.S., D.P.H.; *Salary*, £30.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	8·8	*7·5	nil.	0·44	50
1913.....	8·0	8·9	1·34	nil.	55
Mean of 10 years					
1904-1913 .....	9·8	12·3	0·27	1·64	73

*Increase or Decrease*  
in 1914 on—

<i>Previous Year</i> .....	+0·8	—1·4	—1·34	+0·44	—5
<i>Ten Years' Average</i> .....	—1·0	—4·8	—0·27	—1·20	—23

\* Corrected by "factor" ( $\cdot 9276$ ) = 6·9 per 1,000.

On the 1st April, 1914, by an Order of the County Council, the boundaries of the district extended so as to include portions of the Townships of Broughton East and Allithwaite

Lower. An area of 322 acres, with a population of 26, thereby transferred from the Ulverston Rural District.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 2, scarlet fever 12, erysipelas 1, pulmonary tuberculosis 4. No death from non-notifiable disease.

*Hospital Accommodation.*—For small-pox, arrangement with Barrow-in-Furness Corporation. Ordinary infectious diseases isolated at Kendal sanatorium, by arrangement with the Borough Council. One case of diphtheria and 8 cases of scarlet fever treated.

*Disinfection.*—No proper apparatus. Rooms disinfected 21.

*Water Supply* from Council's reservoir at Newton-in-Cartmel. Owing to complaints as to want of pressure at the southern end of the district, a new 6-inch main laid through Park Road to Kents Bank Road, and a 6-inch pipe substituted for the 3-inch main in the Esplanade. It is proposed to cover in the filtered-water tank at an early date.

*Sewage.*—Treatment: settling tanks and thence to sea.

*Scavenging* by Authority, satisfactory. The Guides' Quarry tip received 1,088 loads of refuse.

*Sanitary Inspection.*—Houses inspected 28, defects remedied at 16. Dairies and cowsheds regularly inspected and found fairly good; three dairy farms in the added area. Factories and workshops received 156 visits. Drainage of 5 houses reconstructed, and minor improvements to drainage of several others carried out. Owners of Grange Marsh induced to thoroughly cleanse the ditches, and thus abate an old standing nuisance. Statutory notices served 2. Records of sunshine and rainfall appended to report.

**Great Crosby.**—(Area in acres, 1,867 ; Estimated Population, 13,568).— *Medical Officer of Health*, J. HUSKIE, M.B., C.M. (Edin.) ; *Salary*, £100.

*Vital Statistics.*

PER 1,000 OF POPULATION.

	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	20.0	*9.7	0.36	0.51	70
1913.....	20.4	9.1	0.30	0.52	73
Mean of 10 years 1904-1913 .....	19.4	10.1	0.85	0.47	87

*Increase or Decrease  
in 1914 on—*

<i>Previous Year</i> .....	—0.4	+0.6	+0.06	—0.01	—3
<i>Ten Years' Average</i> .....	+0.6	—0.4	—0.49	+0.04	—17

\* Corrected by “ factor ” (1.0789)=10.4 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 14 (1 death), scarlet fever 50, enteric fever 4, erysipelas 8, puerperal fever 1 (fatal), pulmonary tuberculosis 17, other forms of tuberculosis 4, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : whooping cough 2, diarrhoea 2. Scarlet fever, in a mild form, prevalent throughout the year.

*Hospital Accommodation* provided at Liverpool infectious diseases hospitals, by arrangement with the Corporation. Cases treated : diphtheria 8, scarlet fever 30, enteric fever 1.

*Disinfection* of clothing, bedding, &c., by Council's “ dry-heat ” apparatus at store yard. Rooms fumigated with sulphur, and walls stripped, 259. Four schools disinfected during summer and winter holidays.

*Water Supply* from Liverpool Corporation mains.

*Sewage* discharges by gravitation into sea. Sewerage system—water-carriage—periodically flushed with water from mains ; 131 smoke tests applied to drains.



*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses reported unfit for habitation 2. To factories and workshops 47 visits made ; 3 defects remedied. Privy middens converted to water closets 23 ; only 21 now remain. Cowsheds, visited periodically, found well kept. One cow with tuberculous udder destroyed. Mr. Wilson (Inspector) served 134 notices, and secured the abatement of a like number of nuisances. Smoke observations 50.

Notable sanitary improvements.	Street paving ; extension of sewers ; drainage improvements.
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Sanitary requirement.	Refuse destructor.
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**Great Harwood.** — (Area in acres, 2,868 ; Estimated Population, 14,000).—*Medical Officer of Health*, JOHN PATCHETT, L.R.C.P.E. ; *Salary*, £70.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·2	*11·1	1·14	0·50	96
1913.....	19·0	12·0	0·50	0·64	97
Mean of 10 years					
1904-1913 .....	21·1	12·1	0·90	0·68	113
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+3·2	—0·9	+0·64	—0·14	—1
<i>Ten Years' Average</i> .....	+1·1	—1·0	+0·24	—0·18	—17

\* Corrected by " factor " (1·1492)=12·7 per 1,000.

*Infectious Diseases*.—Cases notified : diphtheria and membranous croup 15 (2 deaths), scarlet fever 82, erysipelas

12 (1 death), puerperal fever 3 (2 deaths), pulmonary tuberculosis 19, other forms of tuberculosis 5, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: measles 9, whooping cough 1, diarrhoea 4. Scarlet fever (mild form) prevalent throughout the year. An outbreak of measles during May necessitated school closure, and similar action was taken towards the end of the year to cope with an outbreak of whooping cough.

*Hospital Accommodation.*—Nil.

*Disinfection.*—Arrangement with Accrington Corporation for use of their steam apparatus. Houses disinfected 118.

*Water Supply* from Accrington and District Water Board's reservoir, situate at Dean Clough within the district.

*Sewage.*—Treatment: continuous precipitation and irrigation at Clayton-le-Moors and Great Harwood joint outfall sewage works. Scheme for extension of works now being carried out; estimated cost £15,000.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—House-to-house visitation made, and particulars obtained as to housing accommodation. Public abattoir provided. Unsound food surrendered and destroyed 1,360 lbs. Limewashing of cowsheds attended to. Factories and workshops received 82 visits; defects remedied 7. About 80 per cent. of closet accommodation on waste-water system. The Inspector (Mr. Eddleston) served 49 notices; nuisances remedied 439. Smoke observation 16.

Sanitary requirements.

Refuse destructor; steam disinfectant; infectious diseases hospital.

**Haslingden (Borough).**—(Area in acres, 8,196 ; Estimated Population, 19,000).—*Medical Officer of Health*, F. J. HINDLE, L.R.C.P.E. ; *Salary*, £75.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17.4	*15.2	0.68	0.63	111
1913.....	16.3	15.2	1.31	0.78	129
Mean of 10 years					
1904-1913 .....	19.0	14.9	1.12	0.92	135

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+1.1	nil.	—0.63	—0.15	—18
<i>Ten Years' Average</i> .....	—1.6	+0.3	—0.44	—0.29	—24

\* Corrected by “ factor ” (1.0978)=16.6 per 1,000.

Notification of Births Act became operative in March ; health visitor made 736 visits.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 19 (2 deaths), scarlet fever 71 (2 deaths), enteric fever 9 (2 deaths), erysipelas 13, pulmonary tuberculosis 59, other forms of tuberculosis 11. Deaths from non-notifiable diseases : measles 5, whooping cough 1, diarrhoea 1. Scarlet fever prevalent from June to October. Head teachers immediately notify cases of infectious sickness coming to their notice.

*Hospital Accommodation* provided by agreement with Bury and District Joint Hospital Board. Cases treated : diphtheria 1, scarlet fever 3, enteric fever 1.

*Disinfection.*—Steam disinfector at destructor works. Houses disinfected 142.



*Water Supply* from Bury and District, and Accrington, &c., Joint Water Boards. A few private supplies to farms and houses; one found to contain lead was satisfactorily dealt with.

*Sewage*.—Treatment: precipitation and filtration at Ewood Bridge joint sewage works. Separate system of drainage mostly adopted.

*Scavenging* by Authority. Refuse destructor consumed 3,511 tons of material.

*Sanitary Inspection*.—Houses inspected 305, of which 100 had no through ventilation; closing orders made 7; three closing orders issued last year determined, after alterations to houses. Two dwelling-houses, for which closing orders were made, still occupied, owing to dearth of houses. Slaughter-houses (with one exception) totally unfit for the purpose; public abattoir necessary. Food destroyed as unfit for consumption 2,040 lbs., of which 1,367 lbs. was tubercular meat; legal proceedings taken in one instance, the owner of 308 lbs. of tuberculous beef being fined £3 for exposing same for sale, whilst another person fined 10s. for aiding and abetting in the same case; emergency slaughter at farms resulted in 590 lbs. of meat being condemned. Bye-laws, approved in 1913, with respect to houses let-in-lodgings have not yet been put into operation. Cowsheds in fair condition; defects discovered and dealt with 37. In one instance new building provided in lieu of cowshed now disused. Factories and workshops received 87 visits. One privy midden and 88 pail closets converted to water closets. Council contribute £2 towards conversion of each pail closet, but no monetary assistance in privy conversions. The Inspector (Mr. Austin) served notices for abatement of 282 nuisances. Smoke observations 15.

Sanitary requirement.

Public abattoir.

**Haydock.**—(Area in acres, 2,411; Estimated Population, 10,025).—*Medical Officer of Health*, ARTHUR DOWLING, L.R.C.P. (Edin.); *Salary*, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	30·8	*12·8	1·89	0·69	119
1913.....	32·3	15·2	2·99	0·49	151
Mean of 10 years					
1904-1913 .....	34·4	15·3	2·88	0·57	145
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·5	—2·4	—1·10	+0·20	—32
<i>Ten Years' Average</i> .....	—3·6	—2·5	—0·99	+0·12	—26

\* Corrected by "factor" (1·0857)=13·8 per 1,000.

Notification of Births Act adopted. Health visitor appointed jointly with Golborne.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 19 (1 death), scarlet fever 9 (1 death), erysipelas 17, poliomyelitis 1, pulmonary tuberculosis 8, other forms of tuberculosis 14, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: measles 2, diarrhoea 15. School closure on account of mumps. Twelve specimens of sputum bacteriologically examined.

*Hospital Accommodation* available for ordinary infectious diseases at St. Helens sanatorium. Cases treated: scarlet fever 6 (1 death). Two wooden pavilions provided for small-pox.

*Disinfection.*—Steam disinfector at St. Helens hospital. Houses fumigated and sprayed 26.

*Water Supply* derived from Liverpool Corporation reservoirs, Rivington; an emergency supply (only used on five days) from Lyme Pits, Haydock, also available.

*Sewage* gravitates to outfall works at Wicken Hedge and Blackbrook. Treatment: open septic tanks and percolating

filters. Two small areas containing 68 houses without proper drainage systems. Extension of main sewer in Church Road completed, 912 lineal yards laid during year. New sewerage and sewage disposal scheme arranged for Haydock Lodge Asylum; works being carried out by Council. Smoke test applied to drains.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected 29, unfit for habitation 9; closing orders made 16; extensive structural alterations and improvements to 18 dilapidated cottages. Privies converted to water closets 87, privy middens still existing 1,470. Factories and workshops received 27 visits, dairies and cowsheds 24. The Inspector (Mr. Dickinson) served 62 notices; nuisances remedied 236.

Notable sanitary improvements. Sewer extensions; street paving; privy conversions.

Sanitary requirements. Adoption of water-carriage system; "making good" of unadopted streets, back passages, and yards.

**Heysham**.—(Area in acres, 1,835; Census Population, 3,350).—*Medical Officer of Health*, RICHARD HERD, B.A., B.C.; *Salary*, £30.

#### *Vital Statistics.*

##### PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	12·8	*15·2	0·29	nil.	46
1913.....	9·2	13·4	nil.	0·29	64
Mean of 10 years					
1904-1913 .....	15·2	12·2	0·46	0·69	105
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+3·6	+1·8	+0·29	—0·29	—18
<i>Ten Years' Average</i> .....	—2·4	+3·0	—0·17	—0·69	—59

\* Corrected by "factor" ( $\cdot 8881$ ) = 13·4 per 1,000.

*Infectious Diseases*.—Cases notified: scarlet fever 11,



enteric fever 5 (1 death), erysipelas 3. Deaths from non-notifiable diseases : nil. School closure on account of scarlet fever.

*Hospital Accommodation.*—Two separate buildings (each containing 4 beds) for small-pox and ordinary infectious diseases. Cases treated : scarlet fever 11.

*Disinfection.*—Steam disinfectors at Lancaster available.

*Water Supply* mainly from Lancaster Corporation. A few houses supplied from well. It is recommended that all houses be supplied with town's water.

*Sewage* discharged into open sea.

*Scavenging* by Authority, satisfactory. A covered sanitary cart of newest type obtained.

*Sanitary Inspection.*—Houses inspected 31 ; defects remedied 20. A few small houses erected, but still a great demand for cottages, many workers having to reside outside district owing to dearth of suitable dwellings. Many streets require repairs or repaving ; the urgency of this work is emphasised. The privies at Heysham school, and the tippler closets in Granville Road, should be replaced by fresh-water closets. Four privies converted to water closets. Visits to cowsheds 18 ; paving in some instances requires attention. Workshops satisfactory ; one underground bakehouse. Slaughter-houses well kept, but too near dwelling-houses. The Inspector (Mr. Millar) served 20 notices ; nuisances remedied 20.

Sanitary requirements.

More attention to condition of roads ; privy conversions ; additional housing accommodation.

**Heywood (Borough).**—(Area in acres, 3,658 ; Estimated Population, 27,100).—*Medical Officer of Health*, H. H. I. HITCHON, M.R.C.S. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·4	*17·8	0·70	1·36	137
1913.....	22·0	18·3	1·77	1·40	169
Mean of 10 years					
1904-1913 .....	21·9	17·2	1·75	1·35	145
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·6	—0·5	—1·07	—0·04	—32
<i>Ten Years' Average</i> .....	—1·5	+0·6	—1·05	+0·01	—8

\* Corrected by " factor " (1·0692)=19·0 per 1,000.

Attention again called to high infant mortality, the chief cause of which is said to be improper feeding ; 64 per cent. of the infants dying under one year of age were bottle fed. " Wasting diseases " caused 24 per cent. of the infant mortality. As a means of reducing this preventable high death-rate, Dr. Hitchon recommends the adoption of the Notification of Births Act, appointment of a health visitor, establishment of an Infant Welfare Centre, and increased efforts in the direction of converting pail and privy closets to the water-carriage system.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 8 (4 deaths), scarlet fever 239 (3 deaths), enteric fever 5, erysipelas 15 (4 deaths), puerperal fever 6 (1 death), pulmonary tuberculosis 60, other forms of tuberculosis 40, ophthalmia neonatorum 5, chicken-pox—notifiable for six months from April—33. Deaths from non-notifiable diseases : measles 3, whooping cough 6, diarrhœa 3. Chicken-pox was made notifiable owing to an outbreak of small-pox

in the neighbourhood. Scarlet fever of a mild form prevailed from April to end of year. Measles necessitated school closure. Twenty-two specimens sent for bacteriological examination.

*Hospital Accommodation.*—For small-pox provision available at the hospital at Birtle, previously belonging to this district, but now transferred to the Bury and District Joint Hospital Board. For ordinary infectious diseases an arrangement exists with the Rochdale Corporation. Cases treated : scarlet fever 60 (1 death).

*Disinfection.*—Steam apparatus at small-pox hospital. Provision of suitable apparatus in a convenient part of the district recommended. Houses fumigated 474.

*Water Supply* obtained from Heywood and Middleton Joint Board.

*Sewage.*—Treatment : Botany Bay works—precipitation tanks, storm filters, continuous filtration, and humus tanks. Heap Bridge works : detritus tanks, land, and storm filter.

*Scavenging* by Authority, satisfactory. Refuse destructor in operation.

*Sanitary Inspection.*—Houses inspected 490, unfit for habitation 23, closing orders 14, houses demolished 5. Public abattoir recommended to remedy nuisances caused by close proximity of existing slaughter-houses to dwellings, and to obviate the difficulty now experienced in supervising slaughtering of cattle. About 425 lbs. unsound meat, and quantity of fish, seized and destroyed. Structural alterations made at three cowsheds. More attention required regarding grooming of cattle, and cleanliness in process of milking. Reference made to the undesirable practice of storing large accumulations of manure in too close proximity to cowsheds. Regular inspection of milch cows by a veterinary inspector



advocated. Visits to factories and workshops 152, defects remedied 18. Thirty-eight canal boats examined. Sixty-four privies and 3 pails, in connection with 150 houses, abolished and fresh-water closets substituted. Over 1,200 privy middens and pail closets still remain, and Dr. Hitchon advises the Council to give this matter their serious attention. The Inspector (Mr. Robinson) served 476 notices; nuisances remedied 1,071. Smoke observations 115, legal proceedings instituted in 5 instances; fines amounting to £7 15s. imposed.

Sanitary requirements.

Provision of disinfecting apparatus in Borough; conversion of privy and pail closets; abattoir; public conveniences.

**Hindley.** — (Area in acres, 2,612; Estimated Population, 24,600).—*Medical Officer of Health*, JAMES CHRONNELL, M.R.C.S.; *Salary*, £125.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	30·2	*15·1	1·62	0·56	125
1913.....	29·2	17·6	2·63	0·90	154
Mean of 10 years					
1904-1913 .....	29·6	16·7	2·66	0·77	156
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+1·0	—2·5	—1·01	—0·34	—29
<i>Ten Years' Average</i> .....	+0·6	—1·6	—1·04	—0·21	—31

\* Corrected by "factor" (1·1142)=16·8 per 1,000.

Notification of Births Act in force, and health visitor appointed. Committee appointed to consider matters pertaining to child welfare.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 14 (3 deaths), scarlet fever 78 (1 death), enteric fever 19 (4 deaths), erysipelas 18, puerperal fever 3 (all fatal), poliomyelitis 1, pulmonary tuberculosis 33, other forms of tuberculosis 34, ophthalmia neonatorum 5. Deaths from non-notifiable diseases : measles 1, whooping cough 6, diarrhoea 25. Measles made compulsorily notifiable in May, 1915. Bacteriological examinations : blood 10, swabs 3, sputum 9.

*Hospital Accommodation.*—Small building with 2 wards, erected for small-pox, now used for enteric fever ; 14 cases treated. Other infectious cases removed to hospitals of adjoining Authorities : scarlet fever 12, diphtheria 1.

*Disinfection.*—Steam disinfectors (Washington Lyons) at Town's yard. Houses fumigated 207.

*Water Supply* obtained from Liverpool Corporation mains.

*Sewage.*—Treatment : Platt Bridge—septic tanks, contact beds, and irrigation. Hindley Green—precipitation and filtration. Enlargement of works at Platt Bridge—now in hand—includes 8 percolating filters with sprinklers.

*Scavenging* by Authority, satisfactory. Necessity for destructor admitted, but no decision yet arrived at. Refuse mainly deposited on tips.

*Sanitary Inspection.*—Houses inspected 116, unfit for habitation and closing orders made 10. General deficiency of housing accommodation causes much overcrowding. Scheme for erection of 34 artizan's dwellings by Council, held in abeyance. Dr. Chronnell again comments adversely on the sanitary condition of schools. One insanitary cowshed demolished and new structure erected. The arrangements made last year for owners to remedy defects at cowsheds have not been carried out. Slaughter-houses unsatisfactory ; provision of public abattoirs again advocated. Unsound

food destroyed 172 lbs. meat and 60 lbs. of fish. Visits paid to factories and workshops 563, defects remedied 20. During the year 179 privies and 26 pail closets converted to water closets. There remain 2,269 conservancy and pail closets to be dealt with, but progress in the Platt Bridge district is impossible until a new main sewer is provided, plans for which are now being prepared. The Inspector (Mr. Southern) served 108 notices ; nuisances remedied 88. Smoke observations : nil.

Notable sanitary improvements. Strangeways pumping station completed ; application for borrowing powers for the " making " of 87 private streets.

Sanitary requirements. Hospital ; destructor ; abolition of back-to-back houses and conservancy system ; paving of back yards and passages ; provision of public abattoir.

**Horwich.**—(Area in acres, 3,257 ; Estimated Population, 16,764).—*Medical Officer of Health*, J. S. SEWELL, M.D. : *Salary*, £80.

#### *Vital Statistics.*

##### PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	21·2	*11·5	0·89	0·89	75
1913.....	22·3	11·8	1·20	0·96	115
Mean of 10 years					
1904-1913 .....	24·8	12·1	1·24	0·71	117
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·1	—0·3	—0·31	—0·07	—40
<i>Ten Years' Average</i> .....	—3·6	—0·6	—0·35	+0·18	—42

\* Corrected by " factor " (1·1400)=13·1 per 1,000.

Notification of Births Acts adopted 1st January 1915 ; health visitor to be appointed.



*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 18 (4 deaths), scarlet fever 74, enteric fever 3 (all fatal), erysipelas 3, pulmonary tuberculosis 33, other forms of tuberculosis 7. Deaths from non-notifiable disease: diarrhœa 8. Specimens submitted for bacteriological examination: blood 5, diphtheria 15, sputum 9, milk 1.

*Hospital Accommodation.*—For small-pox a temporary hospital to accommodate 5 patients available at Red Moss. Ordinary infectious diseases isolated at Fall Birch hospital—48 beds—maintained jointly with Westhoughton and Blackrod. Cases treated: diphtheria 9 (3 deaths), scarlet fever 63, enteric fever 2 (both fatal).

*Disinfection.*—Washington Lyon's steam apparatus at Fall Birch hospital. Houses disinfected 118.

*Water Supply,* derived chiefly from moorland, stored in Markland's reservoir, which has a capacity of 31,000,000 gallons.

*Sewage.*—Treatment: screening chamber, detritus tanks, precipitation tanks, revolving sprinklers, and humus tanks. Dry-weather flow about 550,000 gallons per 24 hours. Sludge dried, pressed into cakes, and sold to farmers. Drains tested by smoke and water; sewers flushed.

*Scavenging* by Authority; refuse removed to tips, 4,067 loads dealt with. Trade refuse collected weekly on payment of 6d. per week for each shop.

*Sanitary Inspection.*—Number of general inspection of premises 183, special inspections under Section 17 of the Housing Act 38, dwellings made fit for habitation without closing orders 25. Shortage of workmen's dwellings with 3 bedrooms. Special Committee discussing a scheme for the erection of about 50 cottages. Pearl Brook continues to be the subject of complaint. Privy middens altered to water closets 147,

pails converted 69. There still exist 64 privies, 95 pail closets, and 1,307 ashpits. Factories and workshops received 57 inspections, and 212 visits paid to dairies and cowsheds. Room for improvement in regard to several cowsheds. Visits to slaughter-houses 338, butchers' shops 279, common lodging-houses 49. Twenty-eight seizures of unsound food. The Inspector (Mr. Brocklehurst) served 263 notices ; nuisances remedied 544. Smoke observations 21.

Notable sanitary improvements.      Conversion of privy and pail closets.

Sanitary requirements.      Improvement in regard to cowsheds ; abolition of ashpits and provision of dust bins ; erection of workmen's dwellings with three bedrooms ; paving bed of Pearl Brook.

**Hurst.**—(Area in acres, 638 ; Estimated Population, 8,112).

—*Medical Officer of Health*, ALBERT HILTON, L.S.A., D.P.H. ; *Salary*, £40.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·4	*16·8	1·60	1·47	116
1913.....	25·8	17·4	2·11	0·87	149
Mean of 10 years					
1904-1913 .....	26·7	16·4	1·70	0·96	153
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+1·6	—0·6	—0·51	+0·60	—33
<i>Ten Years' Average</i> .....	+0·7	+0·4	—0·10	+0·51	—37

\* Corrected by " factor " (1·0619)=17·8 per 1,000.

Referring to the infant mortality rate, the Medical Officer

of Health remarks that “want of cleanliness generally plays a great part in this connection, and it should be the duty of the Sanitary Authority to secure improved conditions of housing, &c., by insisting upon the paving of yards and streets, the removal of refuse, not merely as routine work in regard to sanitation, but also from an educational standpoint, as a stimulus to the better disposed among the community to raise their standard of living.”

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 5 (3 deaths), scarlet fever 79 (4 deaths), enteric fever 3, erysipelas 11, puerperal fever 1 (fatal), pulmonary tuberculosis 14, ophthalmia neonatorum 2. Deaths from non-notifiable diseases: measles 4, whooping cough 1, diarrhoea 1. Seven specimens submitted for bacteriological examination.

*Hospital Accommodation.*—No provision for ordinary infectious diseases. For small-pox, hospital provided at Hartshead, jointly with Ashton-under-Lyne, &c.

*Disinfection.*—Thresh steam apparatus at joint small-pox hospital. Houses fumigated 79.

*Water Supply* obtained from reservoirs under control of Ashton-under-Lyne, Stalybridge, and Dukinfield (District) Waterworks Joint Committee.

*Sewage* treated by precipitation, double contact beds, storm filters, and continuous filtration at Ashton-under-Lyne works.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 1,577, unfit for habitation 16, closing orders made 12, houses demolished 6. Sanitary condition of schools, with the exception of the closet accommodation at Hurst British Schools, said to be good. “Utmost endeavour” being made to bring farm premises up



to the standard required by the regulations in force. Factories and workshops received 276 inspections ; 2 defects remedied. Closet accommodation chiefly on the waste-water system ; 51 privies and 8 pails remain ; no conversions during year. Council offer £2 towards cost of remodelling. The Inspector served 53 notices ; nuisances remedied 53. Smoke observations 26.

Sanitary requirement.                      Hospital accommodation for infectious diseases other than small-pox.

**Huyton-with-Roby.** — (Area in acres, 3,053 ; Census Population, 4,559).—*Medical Officer of Health*, H. F. H. PHILLIPS-HUNT, M.D. ; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	16·2	*12·9	1·09	0·87	94
1913.....	17·7	10·5	0·65	0·43	61
Mean of 10 years					
1904-1913 .....	20·5	11·2	0·73	0·46	76
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·5	+2·4	+0·44	+0·44	+33
<i>Ten Years' Average</i> .....	—4·3	+1·7	+0·36	+0·41	+18

\* Corrected by " factor " (1·0573)=13·6 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 3, scarlet fever 23 (3 deaths), pulmonary tuberculosis 3, other forms of tuberculosis 1. Deaths from

non-notifiable disease : diarrhœa 2. Five swabs bacteriologically examined. An outbreak of scarlet fever occurred during March, April, and May, the number of cases being exceptionally high for this district. Dr. Phillips-Hunt states that the disease assumed a more virulent and malignant form than he had experienced for over 20 years, three cases dying during the first 48 hours.

*Hospital Accommodation.*—Three beds for the treatment of ordinary infectious cases retained at Whiston sanatorium. Cases treated : diphtheria 2, scarlet fever 20 (2 deaths).

*Disinfection.*—Steam apparatus at Whiston sanatorium available. Houses disinfected 26.

*Water Supply* derived from waterworks of Liverpool Corporation.

*Sewage* treated by settling tanks, filtration, and land irrigation. Flushing of drains regularly carried out. Sixteen houses in Whiston Lane connected to new main sewer.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 297, defects remedied 5. Twenty-six visits to factories and workshops. Although 360 privy middens exist, only one converted during the year. One underground bakehouse. The Inspector (Mr. Worrall) served 6 notices. Smoke observations 12.

Notable sanitary improvements.

House drains connected to sewer ; old ditches cleared out ; many roads re-channelled and repaired.

Sanitary requirement.

Conversion of privy middens.

**Ince-in-Makerfield.** — (Area in acres, 2,320 ; Estimated Population, 22,340).—*Medical Officer of Health*, J. H. FLETCHER, M.R.C.S ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	37·3	*19·8	4·11	0·71	145
1913.....	35·6	20·3	4·71	0·53	180
Mean of 10 years					
1904-1913 .....	34·5	19·1	3·69	0·69	183

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+1·7	—0·5	—0·60	+0·18	—35
<i>Ten Years' Average</i> .....	+2·8	+0·7	+0·42	+0·02	—38

\* Corrected by " factor " (1·1021)=21·8 per 1,000.

Notification of Births Act in force and health visitor appointed. The birth-rate, death-rate, and epidemic death-rate are the highest recorded for the County districts.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 18 (7 deaths), scarlet fever 72 (3 deaths), enteric fever 11 (1 death), erysipelas 23, puerperal fever 2 (1 death), pulmonary tuberculosis 31, other forms of tuberculosis 25, ophthalmia neonatorum 7. Deaths from non-notifiable diseases : measles 49, whooping cough 3, diarrhoea 29.

*Hospital Accommodation.*—For ordinary infectious diseases, hospital containing 15 beds provided. Small-pox pavilion, with 12 beds, situated in hospital grounds. Cases treated : diphtheria 2 (1 death), scarlet fever 46 (1 death), enteric fever 6 (1 death).



*Disinfection.*—Steam apparatus at hospital. Houses fumigated 131 ; number of beds and other articles disinfected 1,261.

*Water Supply.*—Partly from Liverpool Corporation reservoir at Rivington, and partly from deep wells at Golborne.

*Sewage* originally treated by bacterial process, septic tanks, and sprinkler-fed filter beds, but owing to subsidence due to mining operations, the works are now under water. New scheme submitted to, and approved by, Local Government Board, but sanction to necessary loan withheld.

*Scavenging* by Authority, “only moderately satisfactory.”

*Sanitary Inspection.*—Houses inspected under Section 17, Housing and Town Planning Act 38 ; closing orders made 34 ; defects remedied without closing orders at 4 houses. Ten back-to-back houses converted into through dwellings. School yards not satisfactory. Factories and workshops received 160 visits. Fifty canal boats inspected, and 11 infringements discovered. Over 1,000 privy middens exist ; only 13 conversions during 1914. The Inspector (Mr. Hindley) served 94 notices ; nuisances remedied 739 ; successful legal proceedings in seven cases. No smoke observations taken.

Sanitary requirements.

Paving of yards ; conversion of privy middens ; provision of sanitary dustbins ; proposed sewage scheme ; appointment of an Assistant Inspector of Nuisances.

**Irlam.**—(Area in acres, 4,629 ; Estimated Population, 8,000).

—*Medical Officer of Health*, EDWIN O. JAGO, M.R.C.S. ;  
Salary, £30.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	29·2	*12·0	0·62	0·50	102
1913.....	24·0	14·8	2·00	0·14	125
Mean of 10 years					
1904-1913 .....	28·3	13·5	1·74	0·62	105
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+5·2	—2·8	—1·38	+0·36	—23
<i>Ten Years' Average</i> .....	+0·9	—1·5	—1·12	—0·12	—3

\* Corrected by “ factor ” (1·0901)=13·0 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 18 (1 death), scarlet fever 13, enteric fever 2 (1 death), erysipelas 18, puerperal fever 3 (1 death), pulmonary tuberculosis 5, other forms of tuberculosis 8, ophthalmia neonatorum 2. Deaths from non-notifiable diseases : measles 1, diarrhoea 2.

*Hospital Accommodation.*—Salford Corporation hospitals available. For a sum of £40 per annum two beds reserved for small-pox ; no contract for other diseases. One case (scarlet fever) removed.

*Disinfection.*—Steam apparatus at Council's yard. Houses disinfected 53.

*Water Supply* obtained mainly from Manchester Corporation. A few outlying farms supplied from wells, and 11 houses on Glazebury Moss by Warrington Corporation.

*Sewage.*—Treatment : tanks and land filtration. Scheme for provision of new sewage disposal works before Local

Government Board. New sewers laid for a distance of 183 lineal yards.

*Scavenging* by Authority ; hitherto the work undertaken by contract.

*Sanitary Inspection*.—Houses inspected 656, premises made habitable without closing orders 277. Council erecting 154 houses. Privy middens converted to water closets 50, leaving 752 to be dealt with. Visits to factories and workshops 67. The Inspector (Mr. Winterbottom) served 9 notices ; nuisances remedied 45. Smoke observations 9.

Notable sanitary improvements.      Scavenging now undertaken by Council ; extension of sewers.

Sanitary requirements.      More workmen's dwellings ; abolition of privy middens.

**Kearsley**.—(Area in acres, 1,004 ; Estimated Population, 9,850).—*Medical Officer of Health*, J. C. EAMES, M.D. ; *Salary*, £80.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·4	*13·2	1·21	0·71	135
1913.....	24·0	13·1	1·63	0·40	156
Mean of 10 years					
1904-1913 .....	24·9	14·6	2·22	0·86	158
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·6	+0·1	—0·42	+0·31	—21
<i>Ten Years' Average</i> .....	—2·5	—1·4	—1·01	—0·15	—23

\* Corrected by " factor " (1·0952)=14·4 per 1,000.

*Infectious Diseases*.—Cases notified : diphtheria and



membranous croup 2, scarlet fever 40 (1 death), enteric fever 7 (1 death), erysipelas 9 (2 deaths), puerperal fever 1, pulmonary tuberculosis 9, other forms of tuberculosis 1, ophthalmia neonatorum 1, continued fever 1. Deaths from non-notifiable diseases: measles 2, whooping cough 1, diarrhoea 7. Five specimens submitted for bacteriological examination.

*Hospital Accommodation.*—Three beds retained at Ladywell sanatorium, belonging to Salford Corporation, for treatment of ordinary infectious diseases; no cases removed. For small-pox Bury, &c., joint hospital available.

*Disinfection.*—No steam apparatus; clothing, &c., disinfected by formalin. Houses disinfected 75.

*Water Supply* obtained from Bolton Corporation mains.

*Sewage.*—Treatment: septic tanks, double contact beds, continuous filtration, and storm tanks at main outfall works; precipitation tank and continuous filtration at Horridge Brook; septic tanks, storm tanks, continuous filtration, and land at Clammerclough works; septic tank and continuous filter at Unity Brook.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 139, unfit for habitation 15, closing orders made 15, houses demolished 2. Inspections of factories and workshops 25, three defects remedied. Privy middens converted to water-carriage system, 140; 1,347 still exist; Council contribute half total cost of conversion. The Inspector (Mr. Walsh) served 304 notices; nuisances remedied 676. Smoke observations 18, legal proceedings 2.

Notable sanitary improvements.	Completion of mortuary ; conversion of privies ; sewerage and paving Back Hilton Street.
Sanitary requirements.	More houses with three bedrooms ; further privy conversions.

**Kirkham.**—(Area in acres, 857 ; Estimated Population, 3,950).—*Medical Officer of Health*, CHARLES COURT, M.B. ; Salary, £30.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·0	*14·9	1·01	2·02	76
1913.....	22·4	17·7	2·08	1·04	348
Mean of 10 years					
1904-1913 .....	24·1	17·5	2·11	1·30	177
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·6	—2·8	—1·07	+0·98	—272
<i>Ten Years' Average</i> .....	—1·1	—2·6	—1·10	+0·72	—101

\* Corrected by " factor " (1·0073)=15·0 per 1,000.

The infant death-rate for the year under review is, with the exception of 1903, when the rates were identical, the lowest recorded for the district.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 3 (1 death), scarlet fever 3, enteric fever 3, erysipelas 2, puerperal fever 2, pulmonary tuberculosis 7. Deaths from non-notifiable diseases : whooping cough 2, diarrhoea 1.

*Hospital Accommodation* provided at Moss Side for ordinary infectious diseases, and at Elswick for small-pox. Cases treated : diphtheria 3 (1 death), enteric fever 3, puerperal fever 2.

*Disinfection.*—No steam disinfectors. Houses fumigated 20, schools 3.

*Water Supply* by Fylde Water Board.

*Sewage* conveyed to settling tanks at Freckleton, and thence to Freckleton Pool. Six new manholes constructed in various parts of district.

*Scavenging* by Authority ; refuse taken to tips.

*Sanitary Inspection.*—Houses inspected 673, including 43 under Section 17 of the 1909 Act, closing orders made 29, houses and obstructive buildings demolished 23. Scheme approved for extensive alterations to houses in Mill Street, Barn Field, Station Road, Freckleton Street, and Orders Lane. Privy middens converted to water-carriage system 17 ; 336 remain. Although Sections 39 to 41 of the Public Health Act, 1907 adopted, no scheme inaugurated to expedite the work of privy conversions. Factories and workshops received 194 inspections ; 4 defects discovered. Visits to cowsheds 43. In October last the cubic space required in cowsheds was, by resolution of the Council, increased from 450 to 600 feet per cow, but so far no regulations made to this effect. Several cowsheds unsatisfactory. Notices served 89, nuisances remedied 132, smoke observations 16.

Notable sanitary improvements.	Houses and obstructive buildings demolished ; purchase by Council of house and adjoining building in New Row for street improvement ; reconstruction of sewers.
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Sanitary requirements.	Conversion of remaining privy middens ; paving of yards ; improvements in cowsheds and revision of regulations.
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**Lancaster (Borough).**—(Area in acres, 3,506 ; Estimated Population, excluding Public Institutions, 38,593).—*Medical Officer of Health*, J. DEAN BUCHANAN, M.B., D.P.H. ; *Salary*, £290 (including £20 for the Port).

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·4	*12·6	0·46	1·39	86
1913.....	19·6	13·5	0·75	0·95	96
Mean of 10 years					
1904-1913 .....	22·4	13·1	1·18	1·00	116

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+0·8	—0·9	—0·29	+0·44	—10
<i>Ten Years' Average</i> .....	—2·0	—0·5	—0·72	+0·39	—30

\* Corrected by “ factor ” (1·0442)=13·1 per 1,000.

The health visitors paid 1,303 visits under the Notification of Births Act. Of the children seen at the first visit, 86 per cent. were breast-fed, and of these 91 per cent. were thriving. Four per cent. were breast and bottle-fed, and of these 83 per cent. were thriving ; of 10 per cent. entirely bottle-fed, 82 per cent. thriving. Work in connection with the Infant Consultation Centre extended ; attendances of mothers 556, houses visited by health visitors 691, by voluntary workers 256. Infant mortality rate lowest recorded since 1891, and the Medical Officer states, “ I am convinced from personal investigation that it can be reduced still further by measures, the cost of which would be trifling compared with the ultimate gain to the community and the nation.”

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 56 (3 deaths), scarlet fever 237 (1 death), enteric fever 28 (2 deaths), erysipelas 23 (1 death), puerperal fever, only 2 cases notified, but 3 deaths registered; pulmonary tuberculosis 93, other forms of tuberculosis 14, ophthalmia neonatorum 6. Deaths from non-notifiable diseases: measles 4, diarrhœa 8. Compared with last year, the number of notifications of scarlet fever largely increased. Specimens submitted for bacteriological examination: enteric fever 52, diphtheria 220, tuberculosis 69, milk 10.

*Hospital Accommodation.*—Two hospitals provided: 11 beds at Littlefell for small-pox, and 42 beds for other infectious diseases at Luneside hospital. Cases treated: diphtheria 12, scarlet fever 203 (1 death), enteric fever 27 (2 deaths), pulmonary tuberculosis 1.

*Disinfection.*—Washington Lyon's steam apparatus at Luneside hospital; 7,149 articles and 69 library books disinfected; houses fumigated 367.

*Water Supply* obtained from the Corporation waterworks. Average daily consumption for domestic purposes about 33 gallons.

*Sewage* discharged without treatment into tidal waters of River Lune. Sewage from isolation hospital passes through settling chamber and open septic tank before discharge into river.

*Scavenging* by Authority, satisfactory. Refuse destructor provided, about 8,130 tons of refuse dealt with.

*Sanitary Inspection.*—Dwellings inspected under Housing and Town Planning Act, 602, of which 103 were represented as unfit for habitation, closing orders made 14. A large number

of houses are untenanted, some fairly modern, and in sanitary condition. Public abattoir provided. Food condemned, 3 tons 5 cwts. Canal boats inspected 29, no contraventions discovered. Systematic examination of cows carried out by veterinary surgeon. The Medical Officer states that "one of the least desirable features of the milk trade, as at present conducted, is the frequency with which milk is exposed to the risk of contamination through being stored and sold in the shops of general dealers." Frequent visits paid to the 72 bakehouses, in four cases limewashing required. Factories and workshops received 620 inspections. Closet accommodation almost wholly on water-carriage system (11,298 fresh-water closets). Fifteen privy middens and 9 pail closets converted during year; only 33 of the former and 121 of the latter now remain. Brick ashpits with double doors are general in the Borough. Dr. Buchanan states "the double-door ashpit is a potential nuisance, in many cases an actual one. It cannot be completely emptied, is not fly-proof, and it is too accessible for children who delve away amongst its contents for rags. The abolition of these ashpits would result in an economic as well as a sanitary gain." The Inspector (Mr. Smith) served 1,777 notices, nuisances remedied 1,751. Successful legal proceedings in one case. No smoke observations.

Notable sanitary improvement.	Activity as regards housing accommodation.
Sanitary requirements.	Abolition of ashpits; further isolation hospital accommodation; extension of child welfare work.

*Port of Lancaster.*—Vessels entering the Port numbered 216, visits of inspection 139, defects recorded 4. No cases of infectious disease occurred. Attention again called to the want of a supply of wholesome water at Glasson Dock.



**Lathom and Burscough.**—(Area in acres, 13,641 ; Estimated Population, 7,381).—*Medical Officer of Health*. J. G. LAING, L.R.C.P.I. ; *Salary*, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·9	*12·7	0·67	0·81	70
1913.....	26·2	13·7	1·50	0·40	125
Mean of 10 years					
1904-1913 .....	25·2	13·8	1·19	0·77	105
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—5·3	—1·0	—0·83	+0·41	—55
<i>Ten Years' Average</i> .....	—4·3	—1·1	—0·52	+0·04	—35

\* Corrected by "factor" ( $\cdot 9804$ ) = 12·4 per 1,000.

On the 17th August, 1914, the Local Government Board confirmed an Order of the County Council transferring an area of 19 acres from this district to the Urban District of Ormskirk.

The Medical Officer of Health strongly urges the District Council to adopt the Notification of Births Act and appoint a health visitor.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 5, scarlet fever 77, erysipelas 7, puerperal fever 3 (all fatal), pulmonary tuberculosis 13, other forms of tuberculosis 9, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: measles 3, diarrhœa 2. School closure necessary owing to prevalence of scarlet fever and measles. Specimens submitted for bacteriological examination: swabs 1, sputum 7, milk 1, butter 1.

*Hospital Accommodation.*—For ordinary infectious diseases, 26 beds available at hospital at Ormskirk provided

jointly with that Authority. For small-pox, 12 beds at Burscough hospital. Cases treated: diphtheria 3, scarlet fever 55. Dr. Laing recommends, in order to minimise the possibility of return cases, that a small cottage be rented for the reception of scarlet fever cases from hospital during the last 10 or 14 days of their convalescence.

*Disinfection.*—Steam apparatus (Goddard's) available at Ormskirk joint hospital. Houses disinfected 67.

*Water Supply* obtained from bore-holes in new red sandstone at Dark Lane, Burscough. New 12-inch pumps installed, capable of delivering 12,000 gallons per hour, as against 5,000 gallons per hour by the original 7-inch pumps.

*Sewage.*—Outfall works for Burscough Town, Burscough Bridge, and part of Lathom, situated at New Lane. Treatment: open continuous flow sedimentation tanks and land irrigation. Sewage from Westhead Village treated in precipitation tanks by alumino-ferric and passed through double contact filters.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 43, no closing orders made. Dr. Laing states, "there is very little overcrowding, but what little there is cannot be dealt with, as there are no other houses available." Ventilation of cowsheds often imperfect and cubic capacity insufficient. Factories and workshops visited 144. Canal boats inspected 21. Privy middens converted to water closets 17; 1,350 remain. Nuisances abated 84.

Sanitary requirements.

Conversion of all privies within the sewage area to water-carriage system.

**Lees.**—(Area in acres, 288 ; Estimated Population, 5,032).—

*Medical Officer of Health*, JAMES CURRIE, M.A., M.B. ;

*Salary*, £45.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·6	*18·0	1·39	0·99	151
1913.....	24·6	21·9	3·52	1·35	164
Mean of 10 years					
1904-1913 .....	26·0	18·7	1·93	0·96	176
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·0	—3·9	—2·13	—0·36	—13
<i>Ten Years' Average</i> .....	—2·4	—0·7	—0·54	+0·03	—25

\* Corrected by " factor " (1·0123)=18·2 per 1,000.

On the 30th March, 1914, the Local Government Board confirmed an Order of the County Council extending the boundaries of the Urban District of Lees so as to include the Township of Crossbank. An area of 86 acres, with a population of 1,360, was thereby transferred to this district from the Limehurst Rural District.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 3 (2 deaths), scarlet fever 64 (2 deaths), erysipelas 4, pulmonary tuberculosis 11, other forms of tuberculosis 6. Deaths from non-notifiable disease : diarrhœa 3. Bacteriological examinations 2.

*Hospital Accommodation.*—Oldham Corporation hospitals said to be available both for small-pox and ordinary infectious diseases. Only one case of scarlet fever removed, this being the first time advantage has been taken of institutional treatment for several years. Formation of a Joint Hospital Board for districts of Lees, Saddleworth, and Springhead under consideration.

*Disinfection.*—Appliances of Oldham Corporation used by arrangement. Houses disinfected 69.



*Water Supply* obtained from mains of Oldham Corporation.

*Sewage* of Lees old area treated at Oldham outfall works; that of the newly acquired parish of Crossbank by precipitation and continuous filtration at works situated within the urban district.

*Scavenging* by contract, satisfactory.

*Sanitary Inspection*.—Houses inspected 65, unfit for habitation and closing orders made 8. Forty-eight visits paid to factories and workshops. Closet accommodation principally on pail system; 865 of this type exist. During the year six additional water closets provided, and 10 pails substituted for five midden privies. Dr. Currie again urges the Council to carry out his recommendations with regard to the conversion of pails to water closets.

Notable sanitary improvement.	Action taken under Housing and Town Planning Acts.
Sanitary requirements.	Hospital isolation of infectious cases; conversion of pail closets.

**Leigh (Borough).** — (Area in acres, 6,359; Estimated Population, 45,500).—*Medical Officer of Health*, F. WEBB, M.R.C.S., D.P.H.; *Salary*, £350.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	26·9	*14·3	1·69	0·83	115
1913.....	27·9	18·0	3·77	1·24	184
Mean of 10 years					
1904-1913 .....	28·4	16·6	2·74	1·01	166
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1·0	—3·7	—2·08	—0·41	—69
<i>Ten Years' Average</i> .....	—1·5	—2·3	—1·05	—0·18	—51

\* Corrected by "factor" (1·0948)=15·6 per 1,000.

Notification of Births Act in force. Health visitor paid

3,472 visits to houses where births had recently taken place. Infant death-rate lowest in history of the Borough, and the number of deaths under 1 year from epidemic diarrhoea and enteritis, 30, or 21 per cent., below the average. Dr. Webb, referring to the diseases mentioned, states that "83 per cent. of the babies who died were artificially fed"; he also records that "43 per cent. of the cases were associated with an excessive quantity of flies." Infants and Mothers' Welfare Centre appreciated by mothers, and good work being effected.

*Infectious Diseases.*—Cases notified: diphtheria 67 (11 deaths), scarlet fever 441 (4 deaths), enteric fever 10 (3 deaths), erysipelas 47, puerperal fever 9 (2 deaths), cerebro-spinal meningitis 1, pulmonary tuberculosis 108, other forms of tuberculosis 33, ophthalmia neonatorum 17. Deaths from non-notifiable diseases: measles 7, whooping cough 9, diarrhoea 43. Scarlet fever prevailed in epidemic form affecting all parts of the Borough; it spread chiefly through the elementary schools. Fortunately the disease was of a mild type, less than one per cent. terminating fatally. School closure resorted to. Bacteriological examinations 153.

*Hospital Accommodation* for small-pox and ordinary infectious diseases provided jointly with Atherton, Tyldesley, &c. Cases treated: diphtheria 31 (6 deaths), scarlet fever 257 (2 deaths), enteric fever 6 (1 death).

*Disinfection.*—Steam disinfectors at destructor works. Houses disinfected 498; schools 25.

*Water Supply* obtained from Corporations of Manchester and Liverpool. A few outlying farms and cottages rely on wells.

*Sewage* treated at Leigh and Atherton joint outfall works by precipitation tanks, continuous filtration, land, humus tanks, and storm lagoons. About 112 acres of land laid out for sewage treatment.

*Scavenging* by Authority, satisfactory. Back streets said to require more attention. Destructor in operation.

*Sanitary Inspection*.—Houses inspected 77; unfit for habitation and closing orders issued 10; houses rendered fit for habitation after closing orders 35; defects remedied without closing orders 12. One house demolished. To meet deficiency Council {have erected 100 houses, and contemplate the erection of 200 more. Slaughter-houses satisfactory, but situation of some “most unsuitable.” Meat condemned and destroyed 2732 lbs., other food 2,428 lbs. Cowsheds generally satisfactory; ventilation and light restricted by tenants in some cases. Many farm dairies unsatisfactory; visits to these premises and milk shops 280. Five samples of milk examined bacteriologically found free from tubercle bacillus, but all shewed presence of dirt. Inspections of factories and workshops 720; defects found and remedied 38. Canal boats examined 68; infringements 15. Privies converted to water closets 134; remainder of privies (642) under notice. The Inspector (Mr. Jackson) served 889 notices; nuisances abated 340. Smoke observations 97.

Notable sanitary improvements.

Action under Housing, &c., Acts; conversion of privies; systematic testing of drains in connection with enteric and diphtheria cases.

Sanitary requirements.

Conversion of remaining privies; attention to drains; scavenging of back streets; substitution of ash bins for ashpits.



**Leyland.**—(Area in acres, 3,725 ; Estimated Population, 8,500).—*Medical Officer of Health*, E. BERRY, L.F.P.S.G. ; *Salary*, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17.1	*12.8	0.58	0.47	116
1913.....	25.0	17.1	0.86	1.11	117
Mean of 10 years					
1904-1913 .....	23.8	14.3	1.02	0.87	121
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—7.9	—4.3	—0.28	—0.64	—1
<i>Ten Years' Average</i> .....	—6.7	—1.5	—0.44	—0.40	—5

\* Corrected by " factor " (1.0510)=13.4 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 2 (1 death), scarlet fever 8, enteric fever 2, erysipelas 2, pulmonary tuberculosis 5, other forms of tuberculosis 3. Deaths from non-notifiable disease : diarrhoea 4. Slight epidemic of measles during May.

*Hospital Accommodation* provided jointly with Chorley, &c., at Heath Charnock. Cases treated : scarlet fever 7, enteric fever 1.

*Disinfection.*—No proper appliances for bedding ; rooms sprayed with formalin.

*Water Supply* from deep wells, belonging to the Council, at Clayton-le-Woods, obtained by pumping, supplemented by a supply from Thirlmere main of Manchester Corporation. The former water very hard.

*Sewage.*—Treatment : continuous settlement and irrigation. Sewers regularly flushed.

*Scavenging* by Authority with hired team labour ; house refuse carted to isolated tips.

*Sanitary Inspection*.—Housing accommodation insufficient ; 1,315 houses inspected, defects at 24 remedied ; 76 new houses erected during the year. To factories and workshops 48 visits paid. Privy middens and pail closets altered to water closets 5 and 4 respectively. The Inspector (Mr. Crozier) served 24 notices. No smoke observations.

Notable sanitary improvements.      New culvert and road widening in Chapel Brow.

Sanitary requirements.      Additional housing accommodation ; proper formation of streets ; attention to yards and back passages ; conversion of privies.

**Litherland**.—(Area in acres, 857 ; Estimated Population, 16,000).—*Medical Officer of Health*, THOMAS D. PADDOCK, M.R.C.S., D.P.H., to April 6th ; T. DAVIES WILLIAMS, M.B., from April 7th ; *Salary*, £70 (no claim).

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	32·5	*17·2	1·87	1·56	142
1913.....	31·7	15·8	3·50	1·18	147
Mean of 10 years					
1904-1913 .....	33·2	14·2	2·28	0·87	126
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·8	+1·4	—1·63	+0·38	—5
<i>Ten Years' Average</i> .....	—0·7	+3·0	—0·41	+0·69	+16

\* Corrected by " factor " (1·0433)=17·9 per 1,000.

*Infectious Diseases*.—Cases notified : diphtheria and

membranous croup 8 (2 deaths), scarlet fever 58 (2 deaths), enteric fever 1 (fatal), erysipèlas 1 (fatal), puerperal fever 3, pulmonary tuberculosis 58, other forms of tuberculosis 20, ophthalmia neonatorum 2. Deaths from non-notifiable diseases : measles 7, diarrhœa 18. School closure resorted to on account of prevalence of scarlet fever.

*Hospital Accommodation.*—Bootle Corporation hospitals available for small-pox and ordinary infectious diseases. Cases treated : diphtheria 5 (2 deaths), scarlet fever 36 (2 deaths).

*Disinfection.*—Steam apparatus at Bootle hospital available. Houses fumigated 71.

*Water Supply* obtained from Liverpool Corporation.

*Sewage* discharged without treatment into River Mersey. Water test applied to new, and smoke test to old drains.

*Scavenging* by Authority, satisfactory ; refuse tipped on low land.

*Sanitary Inspection.*—Houses inspected under Section 17 of the Housing, &c., Act, 153 ; defects remedied at 107. Deficiency of housing accommodation, mainly owing to importation of men employed on war work. Factories and workshops received 74 visits, 13 defects recorded. Closet accommodation almost entirely on water-carriage system, only 3 privy middens and 10 pail closets remain. Ashpits abolished 15 ; galvanized dust bins provided 35 ; additional water closets erected 11. The Inspector (Mr. Carter) served 453 notices ; nuisances remedied 539 ; smoke observations 23 ; successful legal proceedings instituted in one case.



**Littleborough.**—(Area in acres, 7,856 ; Estimated Population, 11,953).—*Medical Officer of Health*, J. T. R. MACGILL, M.B. ; *Salary*, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·5	*14·2	1·00	0·66	112
1913.....	15·5	12·3	0·25	0·75	76
Mean of 10 years					
1904-1913 .....	19·1	13·9	0·80	0·88	110

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+3·0	+1·9	+0·75	—0·09	+36
<i>Ten Years' Average</i> .....	—0·6	+0·3	+0·20	—0·22	+2

\* Corrected by “ factor ” (1·0582)=15·0 per 1,000.

Notification of Births Act adopted during year under report. Health visitor commenced duties in December.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 11 (3 deaths), scarlet fever 56, enteric fever 3 (2 deaths), erysipelas 4, pulmonary tuberculosis 16, other forms of tuberculosis 7. Deaths from non-notifiable diseases : measles 4, diarrhoea 3. With one exception defects found in sanitary arrangements at all houses where diphtheria cases occurred. Scarlet fever cases were of a mild type, and to this fact is attributed its continued prevalence throughout the year. Twelve specimens examined bacteriologically.

*Hospital Accommodation* for ordinary infectious diseases provided at Smithy Bridge, jointly with Milnrow and Wardle.

Cases treated : diphtheria 3, scarlet fever 46, enteric fever 3 (2 deaths). As enteric fever and diphtheria cannot both be treated at the same time, arrangements made with Rochdale Corporation to occasionally treat cases at the Marland fever hospital. For small-pox cases the Bury and District joint hospital now said to be available.

*Disinfection.*—Steam apparatus at hospital, and dry-heat appliances at Canal Wharf. Houses fumigated 77 ; schools 2.

*Water Supply* obtained chiefly from Rochdale Corporation. Several private supplies, which are analysed occasionally ; one supply condemned as the water contained a dangerous quantity of lead.

*Sewage.*—Treatment : precipitation tanks, storm filters, continuous filtration, and humus tank. Sewers occasionally flushed during summer months.

*Scavenging* by Authority, satisfactory. Provision of destructor again recommended.

*Sanitary Inspection.*—Houses inspected in Summit portion of district 114. Much work done in remedying defects, such as damp and defective floors, unsatisfactory drainage arrangements, and windows not made to open. Alterations and repairs effected at farm buildings. Visits paid to factories and workshops 147 ; defects found and remedied 4. Canal boats examined 49. Nineteen pail closets converted to water-carriage ; 1,633 remain. Notices served 141. Smoke observations 54 ; in one instance legal proceedings instituted, and order to abate nuisance obtained.

Sanitary requirements.

Refuse destructor ; public abattoir ; conversion of pail closets.

**Little Crosby.**—(Area in acres, 1,924 ; Estimated Population, 940).—*Medical Officer of Health*, EDWARD BUXTON, M.D. ; *Salary*, £20.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate	
1914.....	30·8	*11·7	nil.	nil.	68
1913.....	16·3	9·7	1·08	nil.	66
Mean of 10 years					
1904-1913 .....	18·8	9·7	0·28	0·63	51
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+14·5	+2·0	—1·08	nil.	+2
<i>Ten Years' Average</i> .....	+12·0	+2·0	—0·28	—0·63	+17

\* Corrected by " factor " (1·1982)=14·0 per 1,000.

*Infectious Diseases.*—Only two cases of notifiable diseases occurred during the year under review, one being scarlet fever and the other pulmonary tuberculosis.

*Hospital Accommodation.*—Liverpool Corporation hospitals available. One case treated : scarlet fever.

*Disinfection.*—Great Crosby Urban District Council's apparatus available.

*Water Supply* obtained from waterworks of Liverpool Corporation.

*Sewage.*—Two systems in use : (a) the waterborne system at Hightown, which discharges into the estuary of River Alt ; and (b) Little Crosby Village section, comprising a settling tank with effluent outlet into an open sewer which discharges ultimately into River Mersey. All drains and sewers periodically flushed.

*Scavenging* by Authority, satisfactory.



*Sanitary Inspection.*—Houses inspected 11, defects remedied 2. Dairies and cowsheds in “medium” condition; regulations not adopted. Five visits made to factories and workshops. No conversions of privies, 57 still exist; nuisances remedied 4.

**Little Hulton.**—(Area in acres, 1,699; Estimated Population, 8,113).—*Medical Officer of Health*, J. H. MARSH, L.R.C.P.E.; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·5	*13·0	0·86	0·49	89
1913.....	24·1	14·7	1·97	1·23	127
Mean of 10 years					
1904-1913 .....	26·6	13·7	1·70	0·95	116

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—0·6	—1·7	—1·11	—0·74	—38
<i>Ten Years' Average</i> .....	—3·1	—0·7	—0·84	—0·46	—27

\* Corrected by “factor” (1·0931)=14·2 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 5, scarlet fever 25, enteric fever 7 (2 deaths), erysipelas 2, pulmonary tuberculosis 9, other forms of tuberculosis 8, ophthalmia neonatorum 2. Deaths from non-notifiable diseases: measles 2, whooping cough 1, diarrhoea 2. Dr. Marsh acknowledges his indebtedness to school officials for prompt information regarding cases of measles, whooping cough and other non-notifiable infectious diseases.

*Hospital Accommodation* provided jointly with Farnworth and Little Lever for ordinary infectious diseases. Cases

treated: diphtheria 1, scarlet fever 16, enteric fever 5 (1 death). For small-pox, arrangement exists with the Bury, &c., Joint Hospital Board.

*Disinfection*.—Steam apparatus (Washington Lyons) at hospital available. Houses fumigated 48.

*Water Supply* obtained from mains of Bolton Corporation.

*Sewage* treated at two outfall works, Ellenbrook and Worsley Road. Method of treatment: septic tanks and continuous filtration. Storm tanks constructed at Ellenbrook works. New works being provided at Peel Lane.

*Scavenging*, by contract, “fairly satisfactory.” As in previous reports, Dr. Marsh recommends the Authority to undertake this work.

*Sanitary Inspection*.—Houses inspected 178, defects remedied at 50. Considerable alterations and improvements being carried out at nine houses previously declared unfit for habitation. General deficiency throughout the district of houses—especially with three bedrooms. Sanitary condition of two schools defective. Structural alterations carried out at certain cowsheds. Thirty inspections made of factories and workshops. Drastic steps said to be necessary at tripe dressing premises to put them in a more sanitary condition. Thirty-six privies converted to water closets; over 600 still exist. The Inspector (Mr. Davies) secured the abatement of 194 nuisances. Smoke observations 4.

Notable sanitary improvement.

Small sewage works for Peel Lane district.

Sanitary requirements.

Further conversion of privies; scavenging by Authority; mortuary; means of sewage disposal in certain areas; erection of three-roomed cottages.

**Little Lever.**—(Area in acres, 808 ; Estimated Population, 5,200).—*Medical Officer of Health*, J. S. PICKFORD, M.R.C.S. ; *Salary*, £30.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·9	*17·8	2·30	1·15	100
1913.....	21·1	13·2	1·92	0·57	154
Mean of 10 years					
1904-1913 .....	24·0	15·0	2·42	0·84	152
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·2	+4·6	+0·38	+0·58	—54
<i>Ten Years' Average</i> .....	—3·1	+2·8	—0·12	+0·31	—52

\* Corrected by " factor " (1·0436)=18·5 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria 1, scarlet fever 70 (2 deaths), enteric fever 5 (2 deaths), erysipelas 5, pulmonary tuberculosis 7, other forms of tuberculosis 2. Deaths from non-notifiable diseases : measles 3, whooping cough 1, diarrhoea 4. Scarlet fever outbreak originated on a canal boat, amongst children who attended a school where disease spread and rapidly assumed epidemic proportions ; school closure adopted. Outbreak of measles necessitated similar action. Six specimens submitted for bacteriological examination.

*Hospital Accommodation* provided jointly with Farnworth and Little Hulton for ordinary infectious diseases. Cases treated : scarlet fever 27 (1 death), enteric fever 5 (2 deaths). Arrangement with Bury, &c., Joint Board for treatment of small-pox cases.

*Disinfection.*—Steam apparatus (Washington Lyons) at hospital available. Houses fumigated 47 ; 2 schools disinfected.

*Water Supply* obtained from Bury, &c., Joint Water Board.



*Sewage.*—Treatment: sedimentation tanks, storm tank, and continuous filtration.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 48; unfit for habitation 35, but no closing orders issued. Shortage of houses with three bedrooms; Council prepared plans and estimates for erection of 30 houses, but owing to the war scheme postponed for six months. Five cases of overcrowding remedied. Closet accommodation at Congregational school unsatisfactory; privies situated in centre of unpaved playground. Factories and workshops received 49 visits of inspection; 6 defects found and remedied. Canal boats examined 49, infringements 8. Conversion of privy middens to water closets proceeding very slowly, only 9 converted during year although 742 exist. The Inspector (Mr. Seddon) served 55 notices; nuisances remedied 48. Smoke observations 7.

Sanitary requirements.

Paving and sewerage of streets; attention to backyards; conversion of privy middens.

**Longridge.** — (Area in acres, 3,285; Census Population, 4,340).—*Medical Officer of Health*, GEORGE JUKES, L.R.C.P.E.; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·8	*13·1	nil.	1·15	174
1913.....	20·2	16·5	1·15	0·69	181
Mean of 10 years					
1904-1913 .....	25·4	15·7	1·06	1·45	141
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·4	—3·4	—1·15	+0·46	—7
<i>Ten Years' Average</i> .....	—5·6	—2·6	—1·06	—0·30	+33

\* Corrected by "factor" (1·0034)=13·1 per 1,000.

Infant mortality, although slightly below previous year's

rate, still much too high. Eleven of the total infant deaths (15) were ascribed to congenital malformations, premature birth, atrophy, and debility.

*Infectious Diseases.*—Cases notified : diphtheria 2, scarlet fever 22, enteric fever 1, erysipelas 1, pulmonary tuberculosis 6, other forms of tuberculosis 3. No death from non-notifiable disease.

*Hospital Accommodation.*—For small-pox, joint hospital at Elswick provided ; other diseases isolated at the Preston (R.), Fulwood, and Longridge joint hospital at Fulwood. Cases treated : diphtheria 1, scarlet fever 16, enteric fever 1.

*Disinfection.*—Steam apparatus at Fulwood hospital may be used. Houses disinfected 13.

*Water Supply* obtained through the Preston Corporation from Dean and Cowley brooks.

*Sewage.*—Treatment : precipitation and filtration ; new sprinkler filter constructed, and contract let for filtering medium.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 44. Seventy-two visits paid to factories and workshops. Closet accommodation chiefly on water-carriage system. Four privy middens converted to pails ; only 14 privies remain. The Inspector (Mr. Marshall) served 105 notices ; nuisances remedied 128.

Sanitary requirement.

Abolition of remaining privy middens.

**Lytham.**—(Area in acres, 2,464 ; Estimated Population, 10,075).—*Medical Officer of Health*, J. C. FISHER, M.A., M.B. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	13·4	*13·1	1·29	0·89	80
1913.....	14·0	12·3	0·50	0·10	78
Mean of 10 years					
1904-1913 .....	14·7	12·0	0·50	0·61	81
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·6	+0·8	+0·79	+0·79	+2
<i>Ten Years' Average</i> .....	—1·3	+1·1	+0·79	+0·28	—1

\* Corrected by “ factor ” ( $\cdot 9739$ ) = 12·7 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 46 (11 deaths), scarlet fever 24, enteric fever 7 (1 death), erysipelas 1, pulmonary tuberculosis 7, other forms of tuberculosis 1. Death from non-notifiable disease : diarrhoea 1. Two schools closed owing to prevalence of diphtheria. Throats of all scholars attending one school specially examined, and it was ascertained that two children were acting as “ carriers.” Specimens submitted for bacteriological examination : diphtheria 88, enteric fever 1, milk 8.

*Hospital Accommodation* for small-pox provided at Elswick. Fylde joint hospital available for ordinary infectious diseases. Cases treated : diphtheria 42 (7 deaths), scarlet fever 18, enteric fever 5.

*Disinfection.*—Steam apparatus at destructor works ; rooms disinfected 163 ; schools disinfected during every vacation ; picture palaces fumigated periodically.

*Water Supply*, of good quality, obtained from Grizedale and Barnacre reservoirs (Fylde Water Board).



*Sewage* of main area pumped and stored in two large tanks, and discharged untreated into sea about one hour after high water. Fairhaven and Ansdell sewage discharged by gravitation into sea ; for this area a large storage culvert is in process of construction. Drain testing and flushing regularly carried out.

*Scavenging* by Authority, satisfactory. Refuse destructor provided.

*Sanitary Inspection*.—Houses inspected 259, unfit for habitation 5. Public abattoir provided. Carcases of two tuberculous pigs destroyed. Dairies, cowsheds, and milk-shops received 64 visits. Eight samples of milk tested for tubercle ; results “negative.” Inspections of factories and workshops 120. Twenty-nine “dry ashpits” abolished and dustbins substituted. The Inspector (Mr. Yates) served 74 notices ; nuisances remedied 273.

Notable sanitary improvement. Abolition of “dry ashpits.”

Sanitary requirement. Completion of West End storage culvert.

**Middleton (Borough).**—(Area in acres, 4,775 ; Estimated Population, 28,750).—*Medical Officer of Health*, FREDK. J. WHEELDON, M.R.C.S. ; *Salary*, £100.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·8	*14·6	1·98	1·21	126
1913.....	20·9	12·9	0·70	0·73	98
Mean of 10 years					
1904-1913 .....	22·4	15·8	1·50	1·22	141
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·1	+1·7	+1·28	+0·48	+28
<i>Ten Years' Average</i> .....	—2·6	—1·2	+0·48	—0·01	—15

\* Corrected by “factor” (1·0744)=15·6 per 1,000.

Notification of Births Act in force ; health visitor paid

1,217 visits. Dr. Wheeldon states “that the majority of mothers wean their children at a very early age, in many cases because of the necessity of returning to work in the mills.”

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 20 (4 deaths), scarlet fever 214 (5 deaths), enteric fever 43 (9 deaths), erysipelas 19 (2 deaths), pulmonary tuberculosis 73, other forms of tuberculosis 13, ophthalmia neonatorum 3. Deaths from non-notifiable diseases: measles 6, whooping cough 15, diarrhoea 18. Scarlet fever prevailed in epidemic form and presented the same difficulties in diagnosis as appear to characterise the majority of cases which have occurred in recent years, being very mild in type. Three cases were discovered in attendance at school in the peeling stage. Of the enteric fever cases, 27 occurred during July; no definite conclusion arrived at as to the origin and source of the infection, beyond the strong suspicion that it was carried to the various houses affected, by a hawker of vegetables and fish, who was subsequently found to be suffering from the early stages of the disease. Specimens submitted for bacteriological examination: diphtheria 12, typhoid 26, sputum 62.

*Hospital Accommodation.*—Rochdale Corporation hospital at Marland available. Cases treated: scarlet fever 132 (4 deaths), enteric fever 41 (9 deaths). Objection having been raised by the Local Government Board to the use of Marland hospital for small-pox cases, agreement entered into with Chadderton, Crompton, and Royton Joint Board for treatment of small-pox cases at Cinder Hill.

*Disinfection.*—Steam disinfectors (Thresh) available. Articles disinfected 2,438; rooms fumigated 978. All schools sprayed on various occasions during year.

*Water Supply* obtained from the Heywood and Middleton Joint Board.

*Sewage*.—Treatment : at present by precipitation and continuous filtration, but main sewers to be connected to Manchester system at an early date. More efficient and systematic ventilation of sewer manholes recommended.

*Scavenging* by Authority, satisfactory. Refuse destructor in operation ; 4,565 loads of ashes dealt with.

*Sanitary Inspection*.—Houses inspected 774, unfit for habitation 19, closing orders made 18. General deficiency of houses with three bedrooms. Council undertaken the erection of 24 houses on the Boarshaw estate, and building operations commenced. One slaughter-house closed during year and one rebuilt. Considerable improvement in cleanliness of dairies and cowsheds, but majority of farmers continue to hold the theory that close stuffy shippens are conducive to health in the cattle, and an advantage as regards the quantity of milk to be obtained. Four samples of milk submitted for bacteriological examination ; one found tuberculous ; animal slaughtered and carcase destroyed. Under the Tuberculosis Order, three other cows slaughtered and destroyed. To factories and workshops 134 visits paid. Canal boats inspected 45, infringements noted 4. Thirty pail closets converted to water-carriage system. Little progress made towards the abolition of ashpits ; 1,773 exist. The Medical Officer of Health advises “ that greater pressure should be applied to owners to abolish them and substitute portable bins.” The Inspector (Mr. Norton) reports in detail on a large number of nuisances remedied ; notices served 188. Smoke observations 146 ; in 12 cases proceedings taken in respect of excessive emissions of black smoke, and fines and costs amounting to over £10 imposed.

Sanitary requirement.

Abolition of ashpits.



**Milnrow.**—(Area in acres, 5,194 ; Estimated Population, 8,760).—*Medical Officer of Health*, JOHN CHADWICK, M.R.C.S. ; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	16.0	*18.2	2.28	0.57	205
1913.....	19.9	14.2	0.57	1.03	74
Mean of 10 years					
1904-1913 .....	19.6	15.2	1.08	1.04	121
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—3.9	+4.0	+1.71	—0.46	+131
<i>Ten Years' Average</i> .....	—3.6	+3.0	+1.20	—0.47	+84

\* Corrected by " factor " (1.0179)=18.5 per 1,000.

Notification of Births Act adopted and part-time health visitor appointed. Infant death-rate exceptionally high.

*Infectious Diseases.*—Cases notified: small-pox 11 (3 other cases were notified, but ultimately proved not to be small-pox), diphtheria and membranous croup 3, scarlet fever 43 (2 deaths), enteric fever 2 (1 death), erysipelas 15, puerperal fever 2 (both fatal), pulmonary tuberculosis 24, other forms of tuberculosis 6. Deaths from non-notifiable diseases: measles 9, whooping cough 2, diarrhoea 6. Small-pox outbreak confined to the workpeople of one cotton mill. All cases isolated in hospital and recovered; the only unvaccinated person had the most severe attack. Mill closed for two weeks and disinfected. About 130 operatives who had been in contact with the persons affected were kept under observation, isolated as much as possible, and the majority vaccinated or revaccinated. Source of infection believed to be due to cotton. During the outbreak about 500 persons were vaccinated. Epidemic of measles necessitated school closure. Four specimens submitted for bacteriological examination.

*Hospital Accommodation* for small-pox now provided by Bury and District Joint Hospital Board ; other infectious diseases removed to Littleborough, Milnrow, and Wardle joint hospital, Smithy Bridge. Cases treated : small-pox 11—at Marland (Rochdale) and Bury ; the three suspected cases were also isolated for a time in hospital. Other cases removed to hospital : diphtheria 1, scarlet fever 38 (2 deaths).

*Disinfection*.—Fraser's portable steam apparatus at Council Offices. Houses disinfected 80.

*Water Supply* mainly obtained from Rochdale and Oldham Corporations. Rural portions of district supplied by local springs.

*Sewage*.—Treatment : septic tanks, continuous filtration, and land. Sewer extended along Haugh Lane. Sewers periodically flushed and tested.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected 95 ; defects remedied at 35. Two back-to-back houses converted into a through house ; 333 back-to-back houses still exist. Marked shortage of houses for the working classes retards abolition of insanitary houses. Slaughter-houses, which are unsatisfactory, and render efficient meat inspection difficult owing to their scattered situation, received 124 visits ; carcase of pig and two parts of carcasses of beef condemned as tuberculous. Improvements effected at several cowsheds. To factories and workshops 46 inspections ; defects found and remedied 4. Two privy and 3 pail closets converted to water closets ; 2 privies converted to pail closets ; 100 privies and 1,250 pail closets in existence. The Inspector (Mr. Warrington) served 23 notices ; nuisances abated 346. Smoke observations 6.

Notable sanitary improvements.	Blocks of property repaired ; sewage works improved.
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Sanitary requirements.	Attention to housing conditions ; conversion of privy and pail closets ; paving of private streets and yards.
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**Morecambe (Borough).**—(Area in acres, 1,801 ; Estimated Population, 14,726).—*Medical Officer of Health*, J. W. WATTERSON, M.B. ; *Salary*, £50 (no claim).

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	12·9	*10·1	0·13	0·40	73
1913.....	12·8	11·8	0·13	0·88	106
Mean of 10 years					
1904-1913 .....	14·8	13·5	0·56	0·90	122

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+0·1	—1·7	nil.	—0·48	—33
<i>Ten Years' Average</i> .....	—1·9	—3·4	—0·43	—0·50	—49

\* Corrected by “ factor ” ( $\cdot 8817$ ) = 8·9 per 1,000.

Notification of Births Act, 1907, not adopted ; no health visitor.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5, scarlet fever 25 (1 death), enteric fever 4, erysipelas 11, pulmonary tuberculosis 17, other forms of tuberculosis 9, ophthalmia neonatorum 1. Death from non-notifiable disease : measles 1. Schools closed on two occasions for mumps and measles. Specimens examined bacteriologically : blood 3, swabs 17, sputum 44, milk 6.

*Hospital Accommodation.*—Twenty-five beds and two cots available in scarlet fever block ; 10 beds and 1 cot in small-pox block. It is proposed to extend the accommodation to allow the treatment of cases of enteric fever and diphtheria. The Medical Officer advocates that a new administrative section be provided when the extension takes place. Cases treated : scarlet fever 24 (1 death), enteric fever 1 (admitted on suspicion, death attributed to meningitis).



*Disinfection.*—Washington Lyon's steam disinfecter provided. Forty-seven houses, with a total of 112 rooms, sprayed with formalin. Three schools disinfected.

*Water Supply* obtained mainly from springs in the millstone grit; a "remarkably pure soft water."

*Sewage.*—Bulk of the sewage passes to closed septic tanks and thence to sea; a smaller proportion discharged direct into sea at a specially chosen point. All main sewers flushed twice a year.

*Scavenging* by Authority, satisfactory. Destructor dealt with 5,964 loads of house refuse.

*Sanitary Inspection.*—Houses inspected under Housing Regulations 5, unfit for habitation 5. Three licenses refused to slaughter-houses until certain alterations with respect to drainage and water supply carried out. Medical Officer states that "a public abattoir will certainly be seriously considered in the near future." There are 16 underground bake-houses. The Veterinary Surgeon reports that there is room for improvement in the cowsheds, though they are cleaner than formerly. Four cows, affected with tuberculosis of the udder, destroyed. Town mainly on water-carriage system. Privy middens converted to water closets 17; 214 still remain. Factories and workshops received 520 visits, 3 defects remedied. The Inspector (Mr. Lamb) served 10 notices; nuisances abated 881.

Notable sanitary improvements.

Sanitary requirements.

Special attention to drains;  
prompt attention to nuisances.

Completion of new sewerage system; public abattoir; addition to infectious diseases hospital; compulsory notification of whooping cough, and a modified system for venereal diseases.

**Mossley (Borough).** — (Area in acres, 3,624 ; Estimated Population, 13,391).—*Medical Officer of Health*, J. HEALEY, M.B. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·2	*15·1	0·89	1·04	84
1913.....	21·5	15·3	0·90	1·05	118
Mean of 10 years					
1904-1913 .....	20·5	15·4	0·77	1·09	116

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—2·3	—0·2	—0·01	—0·01	—34
<i>Ten Years' Average</i> .....	—1·3	—0·3	+0·12	—0·05	—32

\* Corrected by " factor " (1·0105)=15·2 per 1,000.

Notification of Births Act not adopted and health visitor not appointed.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5 (1 death), scarlet fever 108 (4 deaths), erysipelas 8, puerperal fever 2, pulmonary tuberculosis 29, other forms of tuberculosis 3, ophthalmia neonatorum 7. Deaths from non-notifiable diseases : measles 3, whooping cough 1, diarrhoea 3. School closure on account of measles and scarlet fever, which were epidemic during latter half of year.

*Hospital Accommodation.*—Eight beds for small-pox ; no provision for other infectious diseases.

*Disinfection.*—Steam (Delépine-Thresh) disinfectant at sewage works. Rooms disinfected 155 ; articles 928.

*Water Supply* obtained from Swineshaw and Yeoman Hey reservoirs.

*Sewage*.—Treatment: septic tanks and filters. New 9-inch sewer, 988 yards in length, constructed, and drains from 34 houses connected up. New drains smoke tested.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected 120, unfit for habitation 5, closing orders made 4, defects remedied without closing orders 55. Only one pail closet converted to water closet; 2,872 exist. There are only three privy middens. Council bear half-cost of connecting converted mill closets to sewers. Factories and workshops received 67 visits of inspection. Unsound meat voluntarily surrendered and destroyed 320 lbs. The Inspector (Mr. Buckley) served 60 notices; nuisances abated 56. Smoke observations 5.

Notable sanitary improve- Sewer extension.  
ment.

Sanitary requirements. New disinfectors; hospital accommodation; conversion of pail closets.

**Nelson (Borough).** — (Area in acres, 3,466; Estimated Population, 41,500).—*Medical Officer of Health*, A. P. MILLAR, M.D.; *Salary*, £100.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	16.9	*11.4	1.10	0.65	122
1913.....	17.3	11.4	0.73	0.63	91
Mean of 10 years					
1904-1913 .....	18.7	10.9	0.84	0.73	108
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0.4	nil.	+0.37	+0.02	+31
<i>Ten Years' Average</i> .....	—1.8	+0.5	+0.26	—0.08	+14

\* Corrected by "factor" (1.1919)=13.5 per 1,000.

Notification of Births Act in operation. Health visitor



paid 4,349 visits. Deaths due to premature births and congenital defects represent nearly 38 per cent. of infant mortality, and Dr. Millar, in his comments thereon, points out that of the cases of prematurity 75 per cent. were children of employed mothers. Sub-Committee appointed to consider and report upon question of child welfare. During periods of distress, occasioned by the war, the Council granted one pint of milk per day for infants under one year.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 22 (2 deaths), scarlet fever 49, enteric fever 4 (3 deaths), erysipelas 15 (2 deaths), pulmonary tuberculosis 40, other forms of tuberculosis 28, ophthalmia neonatorum 4. Deaths from non-notifiable diseases: measles 18, whooping cough 10, diarrhoea 13. Only one death due to diarrhoeal disease occurred amongst infants during hot weather; the Medical Officer of Health is of opinion that the reduction in the mortality is mainly due to the efforts of the lady health visitor in prevailing upon mothers to prevent food contamination. Specimens submitted for bacteriological examination: diphtheria 3, enteric fever 4, sputum 23.

*Hospital Accommodation* for small-pox—32 beds—at Catlow; for other infectious diseases a composite building with accommodation for 16 patients in course of completion. Two beds retained at Meathop sanatorium (Westmorland); 19 cases of pulmonary tuberculosis and one case other form of tuberculosis sent for treatment by the Corporation.

*Disinfection.*—Steam apparatus (Alliott and Paton's) at destructor works; rooms fumigated 158.

*Water Supply* derived from two gathering grounds; Coldwell reservoir on east side of the town has a capacity

of 80 million gallons, and Ogden reservoir on the west side over 160 million gallons.

*Sewage.*—Treatment : septic tanks, sprinklers, sedimentation, and filtration. New high-level gravitating sewer completed. Drains tested on completion and flushed when required.

*Scavenging* by Authority, satisfactory. Refuse destructor dealt with 7,578 tons of refuse.

*Sanitary Inspection.*—Houses inspected 305. During the year 287 new houses certified for habitation. Under the proposed Town Planning scheme, the number of houses per acre will be reduced from about 35 to 20. Unsound meat condemned and destroyed : two carcasses of cows (tuberculous), one pig, one sheep, and 168 lbs. of beef. Over 35 cwts. of other food stuffs and 8,307 eggs surrendered for destruction. Slaughter-houses unsatisfactory. Scheme for erection of public abattoirs approved by Local Government Board. Veterinary Inspector examined 732 cows in milk, 10 of which were each deficient in one teat. Under the Tuberculosis Order, five animals dealt with and compensation paid. Sanitary condition of dairies and cowsheds mostly unsatisfactory ; firm stand recommended in order to assure compliance with regulations. Factories and workshops received 508 visits of inspection ; defects remedied 50. Closet accommodation : fresh-water closets 2,187, waste-water closets 8,280, pail closets 4 ; no privy middens ; two pail closets converted to water-carriage system. Notices served 237 ; legal proceedings instituted in two cases, summonses withdrawn upon remedial works being completed. Smoke observations 44.

Notable sanitary improvement.	High-level sewer.
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Sanitary requirements.	Public abattoir ; improvements at cowsheds.
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**Newton-in-Makerfield.**—(Area in acres, 3,105 ; Estimated Population, 19,074).—*Medical Officer of Health*, HAROLD E. WATKINS, M.R.C.S. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	26·6	*12·1	1·25	0·99	76
1913.....	27·0	15·0	2·48	1·11	105
Mean of 10 years					
1904-1913 .....	27·7	13·2	1·92	0·95	123

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—0·4	—2·9	—1·23	—0·12	—29
<i>Ten Years' Average</i> .....	—1·1	—1·1	—0·67	+0·04	—47

\* Corrected by “ factor ” (1·0580)=12·8 per 1,000.

Notification of Births Act adopted and health visitor appointed.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 40 (5 deaths), scarlet fever 63, erysipelas 21 (1 death), puerperal fever 1, cerebro-spinal meningitis 1, poliomyelitis 1, pulmonary tuberculosis 48, other forms of tuberculosis 12, ophthalmia neonatorum 3. Deaths from non-notifiable diseases : measles 7, whooping cough 1, diarrhoea 11. Prevalence of measles during April and May necessitated school closure. Specimens submitted for bacteriological examination : enteric fever 5, diphtheria 66, tuberculosis 62, cerebro-spinal meningitis 1.

*Hospital Accommodation.*—For small-pox arrangement made for use of Liverpool sanatorium, Fazakerley ; other



infectious diseases removed to Council's hospital—26 beds—in Bradlegh Road. Cases treated: diphtheria 22 (1 death), scarlet fever 53.

*Disinfection.*—Washington Lyon's steam apparatus at isolation hospital available. Rooms disinfected 376, schools 9.

*Water Supply* derived from Council's waterworks, Southworth Road; a few outlying houses rely on wells.

*Sewage.*—Treatment: detritus chambers, septic tanks, and single contact beds. Parts of Wargrave Ward without proper drainage system; sewage scheme in abeyance. Flushing and testing of drains carried on where required.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 290; one unfit for habitation and closing order made. Shortage of houses for the working-classes; Council's housing scheme deferred. Public abattoir little used; slaughter-houses (3) received 190 visits. Two carcasses of beef and portions of 5 pigs condemned as tuberculous. Inspections of factories and workshops 257. Two pail closets and 95 privy middens converted to water closets; half-cost of conversion of privies borne by Council; 303 privies and 2,728 pail closets exist. The Inspector (Mr. Ashcroft) served 227 preliminary and 190 legal notices; nuisances remedied 591. Smoke observations 18.

Notable sanitary improvements.

Conversion of privies; making of private streets and back passages.

Sanitary requirements.

Refuse destructor; completion of sewage scheme; conversion of remaining privy middens; completion of all back streets.

**Norden.** — (Area in acres, 5,358 ; Estimated Population, 4,000).—*Medical Officer of Health*, W. HIRST BATEMAN, M.B. ; *Salary*, £30.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·7	*13·7	2·25	0·50	93
1913.....	18·7	12·5	nil.	0·75	106
Mean of 10 years					
1904-1913 .....	19·0	12·9	0·56	0·81	101

*Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	nil.	+1·2	+2·25	—0·25	—13
<i>Ten Years' Average</i> .....	—0·3	+0·8	+1·69	—0·31	—8

\* Corrected by “ factor ” ( $\cdot 9927$ ) = 13·5 per 1,000.

Referring to the infant death-rate, Dr. Bateman is of opinion that little further reduction in this rate will be achieved “ until some machinery is set going in the district for giving advice to expectant mothers, and for the visiting of babies immediately after birth.”

*Infectious Diseases.*—Cases notified : scarlet fever 79 (3 deaths), pulmonary tuberculosis 4, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : measles 4, whooping cough 2. Epidemic of scarlet fever at its height during May and June ; one of the main factors in the spread of the disease was “ the considerable want of care on the part of the parents in the isolation of their children who were affected.” Two specimens submitted for bacteriological examination.

*Hospital Accommodation.*—No provision for ordinary infectious diseases. For small-pox a converted farmhouse at Middle Red Lumb, contains four beds.

*Disinfection.*—Steam apparatus at Rochdale available. Houses disinfected 80.

*Water Supply* obtained mainly from Heywood and Middleton Water Board. A few houses still depend on private supplies.

*Sewage.*—Treatment: sedimentation tanks, continuous filtration, storm tank, and storm filter.

*Scavenging* by Authority, satisfactory. Owing to difficulty of securing suitable tips “provision of a destructor will have to be faced in the near future.”

*Sanitary Inspection.*—Houses inspected 78, defects remedied 8. Cowsheds received 25 visits; conditions not satisfactory, but slowly improving; obligation to register not enforced. Inspections of factories and workshops 25. One pail closet converted to water closet, and 8 privies to pail closets. There are 103 privy middens and 673 pail closets in the district. Dr. Bateman again urges that all future conversions should be to water closets. Notices served 7. Smoke observations 17.

Sanitary requirements.	Conversion of privies and pail closets to water closets; refuse destructor; extension of sewers; town planning.
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**Ormskirk.**—(Area in acres, 593; Estimated Population, 7,566).—*Medical Officer of Health*, WILLIAM ANDERTON, F.R.C.S.E.; *Salary*, £70.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19.9	*17.3	0.26	1.45	105
1913.....	21.4	12.7	1.06	0.26	104
Mean of 10 years					
1904-1913 .....	26.5	15.9	1.10	1.37	108
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1.5	+4.6	—0.80	+1.19	+1
<i>Ten Years' Average</i> .....	—6.6	+1.4	—0.84	+0.08	—3

\* Corrected by “factor” (.9886)=17.1 per 1,000.

On the 17th August, 1914, the Local Government Board



confirmed an Order of the County Council whereby an area of 19 acres was added to this district from the Urban District of Lathom and Burscough.

The Medical Officer of Health again strongly recommended adoption of the Notification of Births Act, 1907.

*Infectious Diseases.*—Cases notified : diphtheria 2, scarlet fever 86, enteric fever 2, erysipelas 11, puerperal fever 1 (fatal), pulmonary tuberculosis 13, other forms of tuberculosis 2. Deaths from non-notifiable diseases : measles 1, whooping cough 1. During October, November, and December, scarlet fever of very mild character specially prevalent ; some cases were not discovered until desquamation commenced. Successful legal proceedings taken for exposing a case of measles. Bacteriological examinations 3.

*Hospital Accommodation* provided jointly with Lathom and Burscough, at Burscough for small-pox, and for other infectious diseases at Green Lane (26 beds). Cases treated : diphtheria 2, scarlet fever 77, enteric fever 2.

*Disinfection.*—Steam apparatus at Green Lane hospital used 19 times. Houses disinfected 87.

*Water Supply* very good, obtained from springs in red sandstone.

*Sewage.*—Treatment : settling tanks, land irrigation, and filtration.

*Scavenging* by Authority, satisfactory. Refuse destructor available.

*Sanitary Inspection.*—Houses inspected 76, defects remedied at 25. Deficiency of houses for the artisan classes ; Council's scheme for erection of workmen's dwellings held in abeyance. Notices served for limewashing and ventilation of cowsheds complied with. To factories and workshops 101 visits paid ; 5 defects found and remedied. Six privies

converted to water closets; 533 still in existence. The Inspector (Mr. Chadwick) served 50 notices; nuisances abated 40. Legal proceedings successfully taken in one case. Smoke observations 10.

Notable sanitary improvements.      Attention to yard surfaces and drains.

Sanitary requirement.      Conversion of privy middens.

**Orrell.** — (Area in acres, 1,617; Estimated Population, 6,424).—*Medical Officer of Health*, KENNETH FRASER, M.B., D.P.H.; *Salary*, £60.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·8	*18·3	3·26	0·62	217
1913.....	22·8	15·6	3·28	1·40	178
Mean of 10 years					
1904-1913 .....	28·4	15·8	2·72	0·89	165

#### *Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+5·0	+2·7	—0·02	—0·78	+39
<i>Ten Years' Average</i> .....	—0·6	+2·5	+0·54	—0·27	+52

\* Corrected by “ factor ” (1·0918)=19·9 per 1,000.

Increase in infant mortality, due to premature births, congenital defects, and debility at birth. Dr. Fraser states, that nine, or one-fourth of the total infant deaths, were due to improper feeding. The rate is the highest recorded in the Administrative County. Practically all births occurring in district notified under a “ voluntary ” system. District

nurse, acting as health visitor, paid over 200 visits. Maternity and Child Welfare Centre being organised. Successful "baby show" held in month of June.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 5, scarlet fever 15 (1 death), enteric fever 1 (fatal), erysipelas 11 (1 death), puerperal fever 2, pulmonary tuberculosis 10, other forms of tuberculosis 1, ophthalmia neonatorum 3. Deaths from non-notifiable diseases: measles 5, whooping cough 2, diarrhoea 12.

*Hospital Accommodation.*—Nil. Need for isolation hospital again emphasised by the Medical Officer, who attributes the high case mortality in recent years from enteric fever to want of skilled nursing, and also suggests that the early isolation of scarlet fever cases would tend to prevent the spread of that disease.

*Disinfection.*—No apparatus. Houses fumigated 12.

*Water Supply* obtained from Wigan Corporation reservoir at Bispham.

*Sewage* delivered into Wigan Corporation main at Gathurst. No drain testing. Sewers flushed occasionally.

*Scavenging* by Authority satisfactory.

*Sanitary Inspection.*—Houses inspected 54; unfit for habitation 27, closing orders made 2; defects remedied in all cases. Certain dilapidated and insanitary properties, referred to in a special report by the County Medical Officer of Health, are receiving attention. Dairies and cowsheds received 98 visits. To factories and workshops 320 visits paid, and 8 defects remedied. Closet accommodation: fresh-water closets 263, waste-water closets 8, privy middens 484; only 9 of latter converted to water closets during the year. The Inspector (Mr. Farrimond) served 38 notices; nuisances remedied 102.



Notable sanitary improvement.      Paving of back yards and passages.

Sanitary requirements.      Hospital accommodation ; disinfecting apparatus ; conversion of privy middens ; separation and paving of common yards.

**Oswaldtwistle.**—(Area in acres, 4,885 ; Estimated Population, 16,210).—*Medical Officer of Health*, A. E. TOWNLEY, M.B. ; *Salary*, £75.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·2	*15·7	1·41	0·92	144
1913.....	22·3	15·8	1·37	0·68	155
Mean of 10 years					
1904-1913 .....	23·4	15·0	1·47	0·61	138

*Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	—0·1	—0·1	+0·04	+0·24	—11
<i>Ten Years' Average</i> .....	—1·2	+0·7	—0·06	+0·31	+6

\* Corrected by " factor " (1·0964)=17·2 per 1,000.

Notification of Births Act adopted ; no health visitor. About 30 per cent. of infant deaths due to congenital defects.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 17 (4 deaths), scarlet fever 51, enteric fever 2, erysipelas 8, puerperal fever 1, pulmonary tuberculosis 25, other forms of tuberculosis 2, ophthalmia neonatorum 5. Deaths from non-notifiable diseases : measles 9, whooping cough 6, diarrhoea 4. School closure resorted to on account of measles.

*Hospital Accommodation.*—Provision for small-pox only. The existing premises are unsuitable, and erection of new small-pox hospital under consideration. Owing to special circumstances in connection with 5 cases of scarlet fever, four removed to the small-pox hospital and one case to Blackburn fever hospital.

*Disinfection.* — The steam disinfector at gas works is unreliable, and new up-to-date appliances are recommended. Houses fumigated 66, schools 12.

*Water Supply* from three reservoirs : Jackhouse, Cobbs, and Belthorn Village. Augmentation works at White Syke completed in February ; during a fortnight's trial the yield from bore-hole was 72,000 gallons per 24 hours. At Belthorn Village reservoir the service tanks covered in to prevent contamination of water.

*Sewage.*—Treatment : septic tanks, sprinklers, sedimentation filtration, or irrigation. New outfall works for Belthorn in hand. Sewage scheme for Knuzden under consideration.

*Scavenging* by Authority, satisfactory. Work done by contractor in outlying parts of district. Arrangement with Accrington Corporation to destroy garbage and fish refuse. Dr. Townley regrets that the district is still without a destructor.

*Sanitary Inspection.*—Houses inspected 137 ; unfit for habitation and demolished 7 ; defects remedied at 89. Three cases of overcrowding dealt with. Public abattoirs provided. Tuberculous meat condemned and destroyed, 719 lbs. of beef. Legal proceedings taken against vendor of unsound bananas, who was mulcted in costs of action. Considerable improvements carried out at 14 cow-sheds ; limewashing regulations generally complied with. Factories and workshops received 42 visits of inspection ; defects remedied 6. Mainly owing to inadequate

water supply, closet accommodation mainly on waste-water system ; augmented supply now warrants installation of fresh-water closets at every opportunity ; 45 privies and 15 pails converted. The Inspector (Mr. Ashworth) served 355 notices ; nuisances remedied 331. Smoke observations nil. Rainfall statistics included in report.

Notable sanitary improvements.	Sewerage of Belthorn ; additional water supply.
Sanitary requirements.	Isolation hospital ; refuse destructor ; conversion of privy middens to fresh-water closets.

**Padiham.**—(Area in acres, 970 ; Estimated Population, 14,130).—*Medical Officer of Health*, N. R. DHARMAVIR, F.R.C.S.E., D.P.H. ; *Salary*, £60.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·0	*15·2	1·62	0·56	141
1913.....	23·8	15·1	1·42	0·50	146
Mean of 10 years					
1904-1913 .....	23·9	15·5	1·23	0·83	158
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1·8	+0·1	+0·20	+0·06	—5
<i>Ten Years' Average</i> .....	—1·9	—0·3	+0·39	—0·27	—17

\* Corrected by “ factor ” (1·0855)=16·4 per 1,000.

Adoption of Notification of Births Act was again strongly recommended. “ Mothers’ and Babies’ Welcome ” established ; clinic opened in September and weekly consultations held ; 594 attendances of mothers ; 190 children on the books ; 120 visits paid to houses by health visitor.



*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 6 (1 death), scarlet fever 15, enteric fever 1 (fatal), erysipelas 17 (1 death), puerperal fever 2 (both fatal), cerebro-spinal meningitis 1, pulmonary tuberculosis 16, other forms of tuberculosis 4, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : measles 15, whooping cough 4, diarrhoea 2. Specimens bacteriologically examined : swabs 2, blood 3, sputum 30.

*Hospital Accommodation* jointly with Burnley, &c., for all infectious diseases. Cases treated : diphtheria 5 (1 death), scarlet fever 10, enteric fever 1 (fatal).

*Disinfection.*—Burnley Corporation steam disinfectors available. Rooms fumigated 121.

*Water Supply* obtained from Churn Clough reservoir, Pendle Hill.

*Sewage.*—Treatment : precipitation, sprinklers beds, and land.

*Scavenging* by Authority, satisfactory. Refuse destructor in operation.

*Sanitary Inspection.*—Houses inspected 300 ; unfit for habitation 94 ; closing orders made 11 ; houses demolished 21 ; defects remedied at 95. Three cellar dwellings closed. Dearth of houses causes much overcrowding in district. Council considered question of providing housing accommodation, but no action taken. With one or two exceptions, dairies and cowsheds kept in good condition ; method of handling milk, in some cases, very unsatisfactory and unclean. Unsound food destroyed 1,728 lbs. beef, 200 trotters, 10 lbs. fish. Visits to factories and workshops 266 ; defects remedied 13. Type of closet accommodation : pails 1,448, waste-water 1,562, fresh-water 448 ; only 25 pails converted to fresh-water closets during the year. The

Inspector (Mr. Ratcliffe) served 354 notices ; nuisances remedied 496. Smoke observations 52. Rainfall statistics included in report.

Sanitary requirements. Conversion of pail closets to water closets ; provision of public baths ; additional housing accommodation.

**Poulton-le-Fylde.**—(Area in acres, 915 ; Estimated Population, 2,435).—*Medical Officer of Health*, JAMES ANDERSON, M.B. ; *Salary*, £25.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17·2	*16·8	0·82	0·41	119
1913.....	17·7	13·2	0·41	nil.	116
Mean of 10 years					
1904-1913 .....	18·6	12·6	0·33	0·61	100

#### *Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—0·5	+3·6	+0·41	+0·41	+3
<i>Ten Years' Average</i> .....	—1·4	+4·2	+0·49	—0·20	+19

\* Corrected by "factor" ( $\cdot 9069$ ) = 15·2 per 1,000.

*Infectious Diseases.*—Cases notified : scarlet fever 3, enteric fever 2 (1 death), erysipelas 1, pulmonary tuberculosis 2, other forms of tuberculosis 3. Death from non-notifiable disease : whooping cough 1.

*Hospital Accommodation.*—Joint hospital at Elswick for small-pox ; for other infectious diseases, at Moss Side. Cases treated : scarlet fever 2, enteric fever 2 (1 death).

*Disinfection.*—Blackpool Corporation steam disinfectors available if needed. Houses fumigated 7.

*Water Supply* obtained from Fylde Water Board.

*Sewage* discharges by gravitation into tidal waters of River Wyre.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—One insanitary house demolished. Seven privy middens converted to water-carriage system; 9 to pail closets. Schools in good sanitary condition. The Inspector (Mr. Moss) served 56 notices; nuisances remedied 73.

**Preesall.**—(Area in acres, 3,232; Estimated Population, 1,753).—*Medical Officer of Health*, M. R. GOODING, M.R.C.S.; *Salary*, £20.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19.9	*12.5	1.71	nil.	85
1913.....	17.1	9.7	nil.	nil.	100
Mean of 10 years					
1904-1913 .....	22.6	11.4	0.65	0.43	82

### *Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+2.8	+2.8	+1.71	nil.	—15
<i>Ten Years' Average</i> .....	—2.7	+1.1	+1.06	—0.43	+3

\* Corrected by “factor” ( $\cdot 9524$ ) = 11.9 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and



membranous croup 2 (1 death), erysipelas 1, poliomyelitis 2, pulmonary tuberculosis 4, other forms of tuberculosis 1. Deaths from non-notifiable diseases: whooping cough 1, diarrhœa 1.

*Hospital Accommodation.*—The Fylde, Preston, and Garstang joint hospital at Elswick available for small-pox. Ordinary infectious diseases occasionally isolated at Moss Side hospital by arrangement with Fylde Joint Board. No cases removed.

*Disinfection.*—No proper appliances. Houses disinfected 6.

*Water Supply* obtained from mains of Fylde Water Board.

*Sewage.*—Dr. Gooding regrets that the sewerage scheme is still in abeyance, and points out that works for relieving the condition of a portion of Preesall Village are “urgently necessary.” Cesspools have had more attention bestowed upon them, and are more frequently emptied than formerly.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 88; unfit for habitation and demolished 1; defects remedied 82. To factories and workshops 23 visits made. Only 5 privy middens converted to water-carriage system; 268 still in existence. An outbreak of anthrax attributed to infected flies acting as “carriers”; this disease had been absent from the district for over 30 years. The Inspector (Mr. Monk) served one notice; nuisances remedied 10. Smoke observations 4.

Sanitary requirements.

Sewerage scheme; further conversions of privy middens.

**Prescot.**—(Area in acres, 409 ; Estimated Population, 8,000).—*Medical Officer of Health*, S. M. GREEN, M.R.C.S., D.P.H. ; *Salary*, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·6	*16·1	1·00	1·37	90
1913.....	30·5	17·1	3·62	0·87	143
Mean of 10 years					
1904-1913 .....	31·3	16·4	2·74	1·09	140
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—2·9	—1·0	—2·62	+0·50	—53
<i>Ten Years' Average</i> .....	—3·7	—0·3	—1·74	+0·28	—50

\* Corrected by " factor " (1·0356)=16·6 per 1,000.

On the 17th August, 1914, the Local Government Board confirmed an Order of the County Council whereby an area of 112 acres was added to this district from the Township of Whiston.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5, scarlet fever 11, enteric fever 5, erysipelas 6, pulmonary tuberculosis 16, other forms of tuberculosis 7, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : whooping cough 1, diarrhœa 7.

*Hospital Accommodation.*—Whiston sanatorium available for all diseases ; retaining fee of £40 per annum paid, plus maintenance charges. Cases treated : diphtheria 3, scarlet fever 8, enteric fever 3.

*Disinfection.*—Whiston sanatorium steam appliances available. Houses disinfected 52.

*Water Supply* obtained from Liverpool Corporation and stored in Council's own reservoirs.

*Sewage.*—Treatment : screening chambers, detritus, hydrolytic, and hydrolising tanks, and filter beds with revolving sprinklers. Sewers regularly flushed.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected 204, unfit for habitation 16, closing orders made 4. Houses demolished 5, defects remedied at 7. Deficiency of housing accommodation; Council erecting twelve artisan's dwellings. At the Church Schools, Houghton Street, new drains substituted for those found defective. About half-cwt. of pork condemned and destroyed. To factories and workshops 74 visits paid; defects remedied 4. Eight privy middens converted to water-carriage system; 806 still in existence. Council's scheme for wholesale conversions held over on account of the war. The Inspector (Mr. Norris) served 61 notices; nuisances remedied 54.

Notable sanitary improvement.      Alterations to property.

Sanitary requirements.      Conversion of privies; paving of back passages; additional housing improvements.

**Prestwich**.—(Area in acres, 2,448; Estimated Population, 15,400, excluding population in County Asylum).—*Medical Officer of Health*, FRED. STEPHENSON, L.R.C.P.E.; *Salary*, £110.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·4	*10·8	0·45	0·64	63
1913.....	22·0	11·0	0·40	0·86	48
Mean of 10 years					
1904-1913 .....	22·2	11·8	0·87	0·70	82
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—2·6	—0·2	+0·05	—0·22	+15
<i>Ten Years' Average</i> .....	—2·8	—1·0	—0·42	—0·06	—19

\* Corrected by "factor" (1·0808)=11·6 per 1,000.

Notification of Births Act adopted; appointment of health visitor under consideration.



*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 3, scarlet fever 109 (2 deaths), enteric fever 6 (2 deaths), erysipelas 4, puerperal fever 1, pulmonary tuberculosis 25, other forms of tuberculosis 8, ophthalmia neonatorum 1. Deaths from non-notifiable disease : whooping cough 3. Twenty-four specimens submitted for bacteriological examination, 9 positive results.

*Hospital Accommodation.*—Salford Corporation hospitals available for all infectious diseases. Cases treated : diphtheria 1, scarlet fever 42 (1 death), puerperal fever 1.

*Disinfection.*—Steam disinfector at Salford hospital may be used. Houses fumigated 81.

*Water Supply.*—Villages of Prestwich, Rooden Lane, and Rainsough derive supply from Manchester Corporation and Bury and District Water Board. Bury water said to be “ of good quality, but requires more filtration and more frequent flushing.” Simister Lane district supplied by Heywood and Middleton Water Board.

*Sewage.*—Treatment : precipitation tanks, storm tanks, continuous filtration, and humus tanks. New length of sewer (944 yards) laid. Sewers periodically flushed. Outlying village of Simister Lane without drainage system.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 187 ; demolished 4. Factories and workshops received 73 visits of inspection ; defects remedied 17. Privy middens converted to water-carriage system 142 ; to pails 1 ; 212 remain. The Inspector (Mr. Windsor) served 103 notices ; nuisances remedied 315. Smoke observations 11.

Notable sanitary improvement.

Conversion of privy middens.

Sanitary requirements.

Flagging of back yards ; refuse destructor ; public urinals.

**Radcliffe.**—(Area in acres, 3,082 ; Estimated Population, 26,050).—*Medical Officer of Health*, D. P. M. FARQUHARSON, M.B., D.P.H. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·4	*13·6	0·65	0·76	124
1913.....	19·5	13·7	0·84	0·88	102
Mean of 10 years					
1904-1913 .....	21·3	15·1	1·37	0·84	143
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·1	—0·1	—0·19	—0·12	+22
<i>Ten Years' Average</i> .....	—1·9	—1·5	—0·72	—0·08	—19

\* Corrected by “ factor ” (1·1102)=15·0 per 1,000.

Notification of Births Act adopted ; two school nurses devote one-third of their time to work under this Act. Appointment of “ whole-time ” health visitor recommended. School clinic established, including means for dental, eye, and general treatment.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 14 (1 death), scarlet fever 72 (2 deaths), enteric fever 6 (1 death), erysipelas 22, puerperal fever 4 (3 deaths), pulmonary tuberculosis 37, other forms of tuberculosis 25, ophthalmia neonatorum 3. Deaths from non-notifiable diseases : measles 2, whooping cough 2, diarrhoea 9. Owing to prevalence of measles, school closure resorted to. Specimens submitted for bacteriological examination : diphtheria 7, enteric fever 12, tuberculosis 41, ringworm 2.

*Hospital Accommodation* provided for all diseases by Bury and District Joint Hospital Board. Cases treated : diphtheria 8, scarlet fever 54 (2 deaths), enteric fever 4 (1 death), puerperal fever 2 (1 death).

*Disinfection.*—Steam apparatus at hospital. Houses fumigated 192.

*Water Supply*, except to a few outlying farms and cottages, from reservoirs of Bury and District Joint Water Board; occasional complaints as to turbidity.

*Sewage.*—Treatment: precipitation tanks, storm tanks, continuous filtration, and humus tanks. Two large bacteria beds recently constructed. Starling district at present without drainage system; scheme in hand for draining about 90 houses. Defective drains gradually being replaced. New drains subjected to water test. Sewers periodically flushed.

*Scavenging* by Authority, satisfactory. Refuse chiefly dealt with by destructor; small quantity deposited on tips and farm land. Dr. Farquharson again recommends “that all unadopted streets and back streets be taken over by the Council and regularly scavenged.”

*Sanitary Inspection.*—Houses inspected 917; unfit for habitation 20; closing orders 4; houses remedied without closing orders 13; demolished 30. Council have scheme in hand for erection of working-class dwellings in Stand Lane Ward to meet deficiency caused by the large number (80) closed during past four years. New school in course of erection, to take place of St. John’s School which is in an insanitary condition. Bakehouses, slaughter-houses, and cowsheds regularly visited. Inspections of factories and workshops 2,168; defects found and remedied 63. Canal boats examined 152; infringements 5. Six pail closets and 260 privies converted into 290 fresh-water closets and 10 waste-water closets. Adoption of bye-law recommended to prohibit erection of waste-water closets. The Inspector (Mr. Smith) served 117 notices; nuisances remedied 2,789; successful legal proceedings taken in one case. Smoke observations 88.



Notable sanitary improvements.	Closing and demolition of insanitary houses ; conversion of privies and abolition of wet ashpits ; paving of back yards.
Sanitary requirements.	Provision of workmen's houses ; attention to remaining insanitary property ; further conversion of privies and pail closets to fresh-water closets ; provision of metal ashbins ; paving of streets and back yards.

**Rainford.**—(Area in acres, 5,877 ; Estimated Population, 3,550).—*Medical Officer of Health*, FRANK PROSSER, M.B. ;  
*Salary*, £30.

### *Vital Statistics.*

#### PER 1,000 OF POPULATION.

	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	29.5	*14.9	1.69	0.28	76
1913.....	28.2	15.8	0.28	0.28	150
Mean of 10 years					
1904-1913 .....	29.4	13.3	1.19	0.32	97

### *Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	+1.3	—0.9	+1.41	nil.	—74
<i>Ten Years' Average</i> .....	+0.1	+1.6	+0.50	—0.04	—21

\* Corrected by " factor " (1.0021)=14.9 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and

membranous croup 6 (5 deaths), scarlet fever 9, enteric fever 2, erysipelas 4 (1 death), puerperal fever 1 (fatal), pulmonary tuberculosis 2, other forms of tuberculosis 2. Death from non-notifiable disease : whooping cough 1. The deaths from diphtheria occurred in each instance on the day of notification, indicating probably that delay took place in obtaining medical assistance. Specimens submitted for bacteriological examination 3.

*Hospital Accommodation.*—Cottage hospital, with four beds. Cases treated : scarlet fever 4.

*Disinfection.*—No proper apparatus. Houses fumigated 6.

*Water Supply* obtained from St. Helens Corporation. A few outlying dwellings rely on private wells.

*Sewage* dealt with by system of cesspools.

*Scavenging* performed partly by Authority and partly by contract, said to be satisfactory.

*Sanitary Inspection.*—Houses inspected 38 ; defects remedied 4. Owing to shortage of houses with three bedrooms, cases of gross overcrowding exist. To meet deficiency, Council are erecting, as a first instalment, 14 houses. Inspections of cowsheds 15. Visits to factories and workshops 21. Although about 700 privy middens exist, no conversions took place. The Inspector (Mr. Smith) served 10 notices ; nuisances abated 10.

Notable sanitary improvement.	Housing scheme.
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Sanitary requirements.	Conversion of privy middens ; additional housing accommodation.
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**Ramsbottom.**—(Area in acres, 6,423 ; Estimated Population, 15,500).—*Medical Officer of Health*, HUGH LAWRIE, M.B., D.P.H. ; *Salary*, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·0	*15·2	0·77	0·83	93
1913.....	17·4	14·3	1·67	1·03	118
Mean of 10 years					
1904-1913 .....	18·4	14·1	1·10	1·14	111
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+0·6	+0·9	—0·90	—0·20	—25
<i>Ten Years' Average</i> .....	—0·4	+1·1	—0·33	—0·31	—18

\* Corrected by “ factor ” (1·0583)=16·0 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 20, scarlet fever 54, enteric fever 7, erysipelas 11 (1 death), puerperal fever 2, poliomyelitis 1, pulmonary tuberculosis 21, other forms of tuberculosis 13, ophthalmia neonatorum 3. Deaths from non-notifiable disease: diarrhoea 12. One school closed and disinfected owing to epidemic of measles. Specimens submitted for bacteriological examination: enteric fever 10, tuberculosis 1, samples of water 3.

*Hospital Accommodation* provided for all diseases by Bury, &c., Joint Hospital Board. Cases treated: diphtheria 7, scarlet fever 21, enteric fever 7.

*Disinfection.*—Steam apparatus at destructor works. Houses disinfected 78.

*Water Supply* mainly obtained from the reservoirs of Bury and District Joint Water Board. About 500 houses



supplied from private reservoirs, &c., and, in addition, “over 300 farms and other isolated dwellings supplied by wells and springs, mostly of a satisfactory quality, but not by any means all free from the risk of dangerous contamination.”

*Sewage.*—Treatment: sedimentation tanks, storm tank, storm filters, continuous filtration, humus tanks, and land. Extensions to works recently completed, include new humus tanks and bacterial filters. Sewers periodically flushed.

*Scavenging* by Authority, except in Summerseat, where work performed by contract under supervision of Authority. Greater portion of refuse taken to destructor.

*Sanitary Inspection.*—Houses inspected 157; defects remedied at 152; back-to-back houses converted into through houses 8; 1 closing order made. Slaughter-houses received 194 inspections. Carcases of 4 pigs and quantity of meat condemned for tuberculosis and destroyed. Visits to cowsheds 116; majority of premises well constructed, but a few unsatisfactory. Inspections of factories and workshops 62; defects found and remedied 10. Sixty-six privies and 37 pail closets converted to fresh-water closets; waste-water closets substituted for 3 privies and 2 pail closets; 427 privy middens and 593 pail closets remain. The Inspector (Mr. Shaw) secured the abatement of 1,044 nuisances. Smoke observations 39.

Notable sanitary improvements.

Back-to-back houses made into through houses; conversion of privy middens; provision of additional sewers.

Sanitary requirements.

Abolition of privies and waste-water closets.

**Rawtenstall (Borough).**—(Area in acres, 9,535 ; Estimated Population, 30,600).—*Medical Officer of Health*, J. E. HELM, B.A., M.B. ; *Salary*, £160.

*Vital Statistics.*

PER 1,000 OF POPULATION.

	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	18·3	*14·9	0·71	0·84	88
1913.....	19·4	13·9	0·49	0·75	101
Mean of 10 years 1904-1913 .....	20·7	14·3	0·86	0·91	115

*Increase or Decrease  
in 1914 on—*

<i>Previous Year</i> .....	—1·1	+1·0	+0·22	+0·09	—13
<i>Ten Years' Average</i> .....	—2·4	+0·6	—0·15	—0·07	—27

\* Corrected by "factor" (1·0705)=15·9 per 1,000.

Notification of Births Act adopted ; operative from March, 1915. A tentative arrangement made for six district nurses to devote part of their time to maternity and child welfare work, under the direction of Medical Officer of Health. Infant death-rate lowest on record for the Borough, attributed mainly to improved sanitation.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 39 (7 deaths), scarlet fever 172 (2 deaths), enteric fever 3 (1 death), erysipelas 28 (1 death), pulmonary tuberculosis 34, other forms of tuberculosis 10, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : measles 4, whooping cough 5, diarrhoea 3. Scarlet fever, of a mild character, present throughout the year ; three schools closed ; unrecognised mild cases responsible for continuance of disease ; seven cases in desquamating stage discovered in schools. Prevalence of measles, whooping cough, and mumps also necessitated school closure. Specimens submitted for bacteriological examination 24.

*Hospital Accommodation.*—For small-pox 22 beds provided at Council's hospital, Hareholme ; arrangement with Bury and District Joint Hospital Board for treatment of other infectious diseases. Cases removed : diphtheria 3, scarlet fever 10, enteric fever 1. A fee of £100 per annum is paid, and when this amount is expended, further cases are charged at the rate of 2½ guineas per week.

*Disinfection.*—Steam apparatus at small-pox hospital ; articles disinfected 1,720. Houses fumigated 232, schools 27, picture palaces 2.

*Water Supply* for about two-thirds the houses obtained from reservoirs of Bury and District Joint Board. A number of houses supplied from private reservoirs, and remainder depend on springs, wells, and cisterns. One private source supplying over 100 houses, improved in quantity and quality.

*Sewage* dealt with at Haslingden, Rawtenstall, and Bacup joint outfall works ; precipitation tanks, continuous filtration, and land. Dr. Helm advocates "closing of all manholes with airtight covers, and ventilating the sewers by means of pipes and shafts," as "emanations from the sewers constitute a danger to health."

*Scavenging* by Authority, satisfactory. One-quarter of house refuse dealt with at destructor works ; remainder deposited on tips.

*Sanitary Inspection.*—Houses inspected 170 ; unfit for habitation 20 ; closing orders 17 ; defects at 150 houses remedied ; houses demolished 6. Deficiency of dwellings in Rawtenstall and Waterfoot districts ; delay in dealing with cases of overcrowding owing to shortage ; Council have matter under consideration. Cowsheds received 372 visits ; conditions improved, but sanitation of many is still unsatisfactory. Arrangement exists for veterinary inspection of cows.



Slaughter-houses satisfactorily maintained ; visits 254 ; unsound meat seized and destroyed 694 lbs. Inspections of factories and workshops 298 ; defects found and remedied 13. Six privy middens and 252 pail closets converted to water-carriage system ; 54 privies and 665 pail closets remain. The Inspector (Mr. Hoyle) served 496 notices ; nuisances remedied 278. Smoke observations 17.

Notable sanitary improvements.	Street paving and sewerage ; improved water supply to over 150 houses.
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Sanitary requirements.	Better ventilation of sewers ; provision of houses for working classes ; further conversion of pail closets.
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**Rishton.**—(Area in acres, 2,985 ; Estimated Population, 7,800).—*Medical Officer of Health*, JOHN BARR, M.B. ; *Salary*, £50.

### *Vital Statistics.*

#### PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	17·5	*12·3	0·64	0·76	94
1913.....	15·3	14·6	0·64	1·53	133
Mean of 10 years					
1904-1913 .....	20·2	11·1	1·11	0·87	109

#### *Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+2·2	—2·3	nil.	—0·77	—39
<i>Ten Years' Average</i> .....	—2·7	+1·2	—0·47	—0·11	—15

\* Corrected by " factor " (1·1417)=14·0 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and

membranous croup 11, scarlet fever 36, enteric fever 2, erysipelas 18, puerperal fever 1, pulmonary tuberculosis 14, other forms of tuberculosis 8. Deaths from non-notifiable diseases : measles 1, whooping cough 4. Measles was somewhat prevalent, and there was an epidemic of whooping cough in the last quarter of the year, necessitating school closure. Specimens submitted for bacteriological examination 23.

*Hospital Accommodation.*—Nil. Arrangement said to exist with Blackburn Corporation to take urgent cases of ordinary infectious disease, but as in previous years, no cases removed.

*Disinfection.*—No apparatus ; “when necessary” infected clothing, &c., sent to Blackburn. Houses disinfected 82.

*Water Supply* obtained from gathering grounds surrounding Dean reservoir.

*Sewage.*—Treatment : (a) septic tanks, sprinklers, and irrigation ; (b) storm-water tanks and sprinklers.

*Scavenging* by Authority, satisfactory. Refuse deposited on tip.

*Sanitary Inspection.*—Housing accommodation said to be “good.” Cowsheds received 30 visits ; a veterinary inspector called in “when necessary.” Inspections of factories and workshops 62. Closet accommodation mainly on waste-water-carriage system. The Inspector (Mr. Cornall) served 134 notices, and secured the abatement of a like number of nuisances. “Several” smoke observations taken.

Sanitary requirements.

Isolation hospital accommodation ; disinfecting apparatus ; refuse destructor.

**Royton.**—(Area in acres, 2,147; Estimated Population, 17,650).—*Medical Officer of Health*, RALPH YOUNG, M.A., M.D. ; *Salary*, £75.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	24.3	*17.6	2.20	0.96	118
1913.....	25.6	17.0	1.08	0.85	120
Mean of 10 years					
1904-1913 .....	26.4	17.6	1.57	0.86	134

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—1.3	+0.6	+1.12	+0.11	—2
<i>Ten Years' Average</i> .....	—2.1	—nil.	+0.63	+0.10	—16

\* Corrected by “ factor ” (1.0812)=19.0 per 1,000.

Consideration of adoption of Notification of Births Act adjourned ; Sub-Committee appointed to consider question of child welfare work.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 16 (3 deaths), scarlet fever 89 (8 deaths), erysipelas 14, puerperal fever 5 (1 death), pulmonary tuberculosis 26, other forms of tuberculosis 11, ophthalmia neonatorum 13, chicken-pox (compulsorily notifiable) 59. Deaths from non-notifiable diseases : measles 15, whooping cough 2, diarrhoea 11.

*Hospital Accommodation.*—Ordinary infectious diseases treated at Oldham Corporation hospital at Westhulme at a charge of 6s. daily per patient ; for small-pox, Cinder Hill joint hospital available. Cases treated : diphtheria 3 (2 deaths), scarlet fever 29 (1 death).



*Disinfection.*—Steam apparatus at Rhodes Bank, Oldham, available. Houses disinfected 174, schoolrooms 14.

*Water Supply* mainly obtained from Oldham Corporation. A few isolated groups of houses rely on springs, which are kept under observation.

*Sewage.*—Treatment: precipitation tanks, storm tanks, single contact beds, and land. Sewers gradually being extended; “now only two or three very small areas without a proper drainage system.” Drains of 93 houses connected to sewerage system; condition of streams much improved in consequence.

*Scavenging* by Authority, satisfactory. Refuse destructor provided.

*Sanitary Inspection.*—Houses inspected 734; defects remedied at 149; one house unfit for habitation and closing order made. New bye-laws made in respect to drainage of buildings, slaughter-houses, offensive trades, &c. Cowsheds better kept, several improved as regards lighting, ventilation, and drainage. Examination of cattle and inspection of meat carried out by a Veterinary Inspector. Factories and workshops received 202 visits; 169 defects found and remedied. Three privies and 7 pail closets converted to water closets; 2 privies to pails. The latter type predominate, over 2,560 exist; only 2 privy middens remain. The Inspector (Mr. Butterfield) served 96 notices; nuisances remedied 262. Smoke observations 25.

Notable sanitary improvements.

New sewer at Longsight; connection of house drains to sewerage system.

Sanitary requirements.

Pavement of yards; abolition of pail closets.

**St. Annes-on-the-Sea.** — (Area in acres, 3,342; Estimated Population, 10,787).—*Medical Officer of Health*, FRED. BOOTH, M.D. ; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	10·5	*9·3	0·27	0·27	105
1913.....	11·6	9·9	0·47	0·47	49
Mean of 10 years					
1904-1913 .....	13·6	10·2	0·38	0·65	84
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1·1	—0·6	—0·20	—0·20	+56
<i>Ten Years' Average</i> .....	—3·1	—0·9	—0·11	—0·38	+21

\* Corrected by " factor " (1·0508)=9·7 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 53, scarlet fever 13, enteric fever 6, erysipelas 5, pulmonary tuberculosis 4, other forms of tuberculosis 3, measles—compulsorily notifiable—116 (1 death). Deaths from non-notifiable disease: diarrhoea 2. Diphtheria, of a mild type, fairly prevalent throughout the year. School closure resorted to owing to prevalence of measles. Specimens submitted for bacteriological examination: enteric fever 11, diphtheria 109, tuberculosis 2, milk 4.

*Hospital Accommodation.*—Elswick hospital available for small-pox; ordinary infectious diseases removed to Fylde joint hospital, Moss Side. Cases treated: diphtheria 30, scarlet fever 4, enteric fever 5.

*Disinfection.*—Steam apparatus by Goddard, Massey, and Warner; 1,796 articles disinfected. Houses fumigated 63 (250 rooms).

*Water Supply* derived entirely from Fylde Water Board.

*Sewage* gravitates to sea without treatment. Proposed sewage scheme not yet proceeded with. Flushing tanks provided at dead ends of sewers. Drains tested by smoke or water.

*Scavenging* by Authority, satisfactory. Refuse destructor in operation.

*Sanitary Inspection*.—Houses inspected 113; defects remedied at 33. Public abattoir provided. Unsound meat surrendered and destroyed 2,378 lbs., included carcasses of 3 cows and 1 pig condemned for tuberculosis. Cowsheds received 88 visits. Cattle examined by Veterinary Surgeon quarterly. Inspections of factories and workshops 171; defects found and remedied 14. Six pail closets abolished and 1 converted to water closet; few privies or pail closets now remain. The Inspector (Mr. Procter) secured the abatement of 395 nuisances; legal proceedings instituted in 3 cases. Smoke observations 35.

Sanitary requirement.

Extension of sewerage system.

**Skelmersdale**.—(Area in acres, 1,942; Estimated Population, 7,000).—*Medical Officer of Health*, VINCENT O'REILLY, M.B.; *Salary*, £45.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	* Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	28·4	*15·5	1·00	0·57	165
1913.....	28·4	18·4	2·71	1·14	190
Mean of 10 years					
1904-1913 .....	33·0	18·0	2·54	0·55	167
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	nil.	—2·9	—1·71	—0·57	—25
<i>Ten Years' Average</i> .....	—4·6	—2·5	—1·54	+0·02	—2

\* Corrected by "factor" (1·0478)=16·2 per 1,000.

Infant death-rate continues well above the County average.



*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 19 (2 deaths), scarlet fever 17, enteric fever 4 (1 death), erysipelas 8, puerperal fever 3 (2 deaths), pulmonary tuberculosis 7, other forms of tuberculosis 8. Deaths from non-notifiable diseases : measles 2, diarrhœa 2.

*Hospital Accommodation.*—No provision for small-pox. For other infectious diseases a cottage hospital provided ; 30 beds. Cases may also be admitted by arrangement to the West Lancashire Rural District Council's hospital. Cases treated : scarlet fever 17, enteric fever 4 (1 death).

*Disinfection.*—Steam apparatus at the West Lancashire hospital may be used. Houses fumigated 43.

*Water Supply* derived from an artesian well at Scarth Hill, Lathom.

*Sewage.*—Major portion of sewage conveyed to the irrigation farms at Penny Street and Berry Street. Council still await sanction of Local Government Board to new sewage scheme.

*Scavenging* by Authority, reported as satisfactory.

*Sanitary Inspection.*—Houses inspected 103. Workmen's dwellings with 3 bedrooms required. Forty-five privy middens converted to water closets ; 731 privy middens still remain. Visits to factories and workshops 41, to cow-sheds 40. The Inspector (Mr. Huntington) served 23 notices ; nuisances remedied 58.

Sanitary requirements.

Conversion of privies and pail closets to water-carriage, and installation of proper system of drainage and sewage disposal ; erection of workmen's dwellings.

**Standish-with-Langtree.**—(Area in acres, 3,266 ; Estimated Population, 7,593).—*Medical Officer of Health*, J. H. WILSON, M.D. ; *Salary*, £35.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	28·1	*12·7	0·65	0·39	130
1913.....	24·2	13·7	2·00	0·53	126
Mean of 10 years					
1904-1913 .....	30·6	15·2	1·44	0·64	142
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+3·9	—1·0	—1·35	—0·14	+4
<i>Ten Years' Average</i> .....	—2·5	—2·5	—0·79	—0·25	—12

\* Corrected by " factor " (1·0778)=13·6 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 6 (2 deaths), scarlet fever 26, enteric fever 9, erysipelas 5 (1 death), pulmonary tuberculosis 10, other forms of tuberculosis 10, measles 3 (1 death). Compulsory notification of the latter disease ceased in June. Deaths from non-notifiable disease : diarrhoea 2.

*Hospital Accommodation.*—No provision for isolating ordinary infectious diseases. For small-pox, cottage hospital (6 beds) provided.

*Disinfection.*—No proper apparatus. Houses fumigated 25.

*Water Supply* derived from the Anglezark reservoir of Liverpool Corporation. (Restriction on volume supplied prevents adoption of water-carriage system.)

*Sewage* treated at Council's works at Boar's Head, and also at two sewage farms ; sewage from the Lower Ground district dealt with by Wigan Corporation. Two sewer extension schemes completed. Sewers periodically flushed.

*Scavenging* by contract, satisfactory.

*Sanitary Inspection*.—Houses inspected 88. Factories and workshops received 47 visits; defects remedied 9. Although 1,006 privies exist only three converted. The Inspector (Mr. Clough) served 85 notices; nuisances remedied 76.

Notable sanitary improvement.      Extension of sewers.

Sanitary requirements.      Conversion of privy middens; paving of back yards; hospital accommodation.

**Stretford**.—(Area in acres, 3,240; Estimated Population, 45,100).—*Medical Officer of Health*, W. J. HESLOP, F.R.C.S.E.; *Salary*, £150.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·0	*12·0	0·50	0·99	83
1913.....	16·4	10·0	0·76	0·49	91
Mean of 10 years					
1904-1913 .....	19·2	11·4	0·89	0·72	106
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+1·6	+2·0	—0·26	+0·50	—8
<i>Ten Years' Average</i> .....	—1·2	+0·6	—0·39	+0·27	—23

\* Corrected by "factor" (1·1097)=13·3 per 1,000.

Notification of Births Act in operation and health visitor appointed.

*Infectious Diseases*.—Cases notified: diphtheria and membranous croup 34 (1 death), scarlet fever 333 (5 deaths), enteric fever 7 (2 deaths), erysipelas 24 (6 deaths), pulmonary tuberculosis 84, other forms of tuberculosis 21, ophthalmia



neonatorum 9. Deaths from non-notifiable diseases : measles 2, whooping cough 3, diarrhoea 10. Specimens bacteriologically examined : diphtheria 38, enteric fever 10, sputum 99 ; 29 per cent. gave positive results.

*Hospital Accommodation.*—Salford Corporation hospitals available by payment of retaining fee. Cases treated : diphtheria 11 (1 death), scarlet fever 190 (3 deaths), enteric fever 5 (1 death), erysipelas 3 (2 deaths).

*Disinfection.*—Washington Lyon's steam disinfector at Empress Street depôt used for disinfection of bedding, clothing, &c. Rooms fumigated 735. Every classroom in elementary schools fumigated twice during year.

*Water Supply* obtained mainly from Manchester Corporation.

*Sewage.*—Portion treated at Manchester Corporation's works, Davyhulme ; remainder at Council's sewage farm. Tests applied to drains, and sanitary fittings of old property revealed 48 and 45·6 per cent. of defects respectively. In the case of new property the tests disclosed defects in 44·2 per cent. of the drains, and 29·5 per cent. of the sanitary fittings.

*Scavenging* by Authority, satisfactory. Refuse destructor in operation, but a quantity of refuse tipped.

*Sanitary Inspection.*—Nine insanitary houses demolished ; closing order made regarding house unfit for habitation. Unsound food condemned and destroyed : one tuberculous carcase, 245 lbs. of fruit, 72 lbs. offal. Cowsheds generally satisfactory. Factories and workshops received 541 visits of inspection ; defects remedied 103. Closet accommodation almost wholly on water-carriage system. A number of waste-water closets and four privies converted to fresh-water closets ; only 8 privy middens now remain. The Inspector (Mr. Nuttall)

served 495 notices ; nuisances abated 3,091. Smoke observations 131 ; in two cases legal proceedings taken and penalties of 10s. and costs imposed.

Notable sanitary improvement.	Conversion of waste-water closets to separately flushed wash-down closets.
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**Swinton and Pendlebury.**—(Area in acres, 2,284 ; Estimated Population, 32,065).—*Medical Officer of Health*, W. STEWART STALKER, M.D., D.P.H. ; *Salary*, £225.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·6	*13·3	1·24	1·34	142
1913.....	23·7	14·9	1·87	0·90	142
Mean of 10 years					
1904-1913 .....	26·7	15·6	2·21	0·97	150
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·1	—1·6	—0·63	+0·44	nil.
<i>Ten Years' Average</i> .....	—3·1	—2·3	—0·97	+0·37	—8

\* Corrected by "factor" (1·1332)=15·0 per 1,000.

Notification of Births Act in operation ; health visitor paid 3,166 visits. Baby clinic and school for mothers well attended. Commenting on the excessive infant death-rate in Market Ward—244 per 1,000 births—Dr. Stalker states "The conditions inimical to infant life which obtain in Market Ward are dirt, overcrowding, bad housing, ignorance, vicious habits, and the use of abortifacient drugs."

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 30 (1 death), scarlet fever 181 (6 deaths), enteric fever 14 (2 deaths), erysipelas 58 (1 death), poliomyelitis 1, pulmonary tuberculosis 103, other forms of tuberculosis

52, ophthalmia neonatorum 12. In addition the following cases were notified in the Children's hospital, Pendlebury: scarlet fever 6, diphtheria 3, cerebro-spinal meningitis 1, and erysipelas 4. Deaths from non-notifiable diseases: measles 1, whooping cough 12, diarrhoea 18. Attack rate of enteric fever lowest on record for the district. Specimens submitted for bacteriological examination: enteric fever 11, diphtheria 49, sputum 35. Two samples of milk bacteriologically examined contained tubercle bacilli.

*Hospital Accommodation.*—Small-pox hospital at Linnyshaw Moss provided jointly with Worsley. Salford Corporation hospital at Ladywell available for ordinary infectious diseases. Cases treated: diphtheria 5 (1 death), scarlet fever 25 (1 death), enteric fever 5 (2 deaths), erysipelas 1 (fatal).

*Disinfection.*—Steam disinfectors provided. Rooms sprayed and fumigated 438.

*Water Supply* obtained from the Manchester Corporation Thirlmere mains; every house connected.

*Sewage* dealt with at two outfall works. Treatment: Swinton, precipitation tanks, storm filters, continuous filtration, and humus tanks; Pendlebury, precipitation tanks, continuous filtration, and humus tanks. Extensive scheme for sewer reconstruction prepared, and sanction obtained for borrowing £10,000 to carry out the work. Area in Langley Road, Pendlebury—40 houses,—without drainage system; sewage discharges into cesspools, then to river.

*Scavenging* by Authority, satisfactory. Destructor provided.

*Sanitary Inspection.*—Houses inspected 251; unfit for habitation 197; closing orders made 35; defective houses remedied without making closing orders 130, after closing orders 14. Demolition orders made 5. To meet deficiency



of working-class dwellings, scheme for erection by the Council of 40 houses approved by Local Government Board, but at present in abeyance. Visits to bakehouses 101; dairies, cowsheds, and milkshops 72; slaughterhouses 209. One carcase affected by generalised tuberculosis condemned and destroyed. Provision of public abattoir recommended. Inspections of factories and workshops 193, defects found and remedied 26. Privies converted to water closets 300, but 1,526 still exist. Dr. Stalker advocates contribution by Council towards cost of conversion. Movable ash receptacles substituted for ashpits numbered 270. The Inspector (Mr. Bleakley) served 325 statutory and 315 preliminary notices; nuisances remedied 1,652. Smoke observations 74. Notable sanitary improvement. Conversion of privy middens.

Sanitary requirements. Provision of public urinals; continued conversion of privy middens; public abattoir.

**Thornton.**—(Area in acres, 2,996; Estimated Population, 5,417).—*Medical Officer of Health*, F. S. RHODES, M.R.C.S.; *Salary*, £45.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·0	*11·0	0·36	0·73	64
1913.....	23·2	7·9	0·37	0·94	65
Mean of 10 years					
1904-1913 .....	25·5	12·3	0·84	0·64	78
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·2	+3·1	—0·01	—0·21	—1
<i>Ten Years' Average</i> .....	—2·5	—1·3	—0·48	+0·09	—14

\* Corrected by "factor" (.9558)=10·5 per 1,000.

*Infectious Diseases.*—Cases notified: scarlet fever 9,

erysipelas 1, pulmonary tuberculosis 5, other forms of tuberculosis 1. Deaths from non-notifiable disease : measles 2.

*Hospital Accommodation.*—Elswick hospital available for small-pox ; other diseases isolated at Fylde joint hospital, Moss Side. Cases treated : scarlet fever 9.

*Disinfection.*—No proper apparatus. Houses disinfected 16.

*Water Supply* mainly obtained from Fylde Water Board ; a few outlying houses depend on stored rain water or wells.

*Sewage.*—System of ejectors (Shone's), worked by compressed air. Sewage discharged near dead low water into the sea. Enlargement of joint storage chamber recommended. Sewers flushed and drains tested. A few houses not yet connected to sewers are a source of pollution to watercourses.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.* — Houses inspected 14, defects remedied at 2, demolished 2. Inspections of slaughter-houses and cowsheds regularly carried out. Factories and workshop received 9 visits. Seventy-eight privy middens and 290 pail closets exist ; no conversions. The Inspector (Mr. Fenton) served 5 notices ; nuisances abated 5. Several smoke observations taken.

Notable sanitary improvements.

Public conveniences, West Ward ; paving Church Road school-yard.

Sanitary requirements.

Extension of sewage storage chamber ; paving of Brown Street and certain back passages.

**Tottington.**—(Area in acres, 2,544; Estimated Population, 6,980).—*Medical Officer of Health*, A. H. POOLE, M.D.; Salary, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	16·9	*13·7	0·57	0·85	84
1913.....	17·2	10·8	0·29	0·43	42
Mean of 10 years					
1904-1913 .....	17·8	12·8	0·78	0·81	103
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·3	+2·9	+0·28	+0·42	+42
<i>Ten Years' Average</i> .....	—0·9	+0·9	—0·21	+0·04	—19

\* Corrected by "factor" (1·0375)=14·2 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 11 (1 death), scarlet fever 19 (1 death), erysipelas 4, pulmonary tuberculosis 16, other forms of tuberculosis 11. Deaths from non-notifiable disease: diarrhoea 2. Number of specimens submitted for bacteriological examination: enteric fever 1, diphtheria 9, tuberculosis 8, water 2.

*Hospital Accommodation.*—Bury and District joint hospitals available for all purposes. Cases treated: diphtheria 10, scarlet fever 16 (1 death), erysipelas 1.

*Disinfection.*—Steam apparatus at hospital available. Houses disinfected 24, schools 5.

*Water Supply* obtained mainly from Bury and District Water Board. The district of Affetside depends on wells, the water from which found, upon analysis, to be unsatisfactory.

*Sewage.*—Three outfall works. Treatment: main works, precipitation tanks and land. Hollymount, precipitation tanks and continuous filtration. Greenmount, continuous filtration. Contract for Greenmount and Hawkshaw sewage scheme let; approximate cost £20,000.



*Scavenging* by contract, unsatisfactory in Greenmount Ward. Dr. Poole advises the Council “to undertake the scavenging by employing its own men, &c., or to ensure more efficient personal oversight of the contractor’s work.”

*Sanitary Inspection.*—Houses inspected 118, closing orders made and houses demolished 2; defects at houses remedied without closing orders 36. Slaughterhouses regularly visited; improvements effected. Inspections of cowsheds 172. Factories and workshops received 36 visits; 3 defects found, 2 remedied. Privy middens converted to fresh-water closets 17, to waste-water closets 6, to pail closets 12; 561 privies still exist. The Inspector (Mr. Kenyon) served 16 notices; nuisances remedied 115. Smoke observations 5.

Sanitary requirements.                      Conversion of privies; better water supply for Affetside; efficient scavenging.

**Trawden.**—(Area in acres, 6,815; Estimated Population, 3,020).— *Medical Officer of Health*, GEORGE SKEEN, M.B.; *Salary*, £20.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·2	*12·2	0·66	0·99	137
1913.....	20·3	13·6	0·33	1·33	114
Mean of 10 years					
1904-1913 .....	24·4	15·3	0·85	1·09	126
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1·1	—1·4	+0·33	—0·34	+23
<i>Ten Years’ Average</i> .....	—5·2	—3·1	—0·19	—0·10	+11

\* Corrected by “factor” (1·0716)=13·0 per 1,000.

*Infectious Diseases.*—Cases notified: enteric fever 13

(2 deaths). Deaths from non-notifiable disease: nil. At the latter end of February enteric fever broke out in the Winewall district, a certain water supply being suspected as the cause; steps were taken to discontinue its use and the public supply substituted.

*Hospital Accommodation.*—For small-pox, Colne Borough hospital available, and negotiations proceeding with the Corporation for isolation of other infectious cases at their hospital. One case enteric fever removed to Burnley hospital.

*Disinfection.*—Nelson Corporation steam apparatus available for bedding, clothing, &c. Houses fumigated 14.

*Water Supply* obtained from a boring on Boulsworth Hill. Until early in 1914 lower portion of Winewall supplied from well and reservoir.

*Sewage.*—Treatment: precipitation and irrigation.

*Scavenging* by Authority, satisfactory. Refuse tipped in disused quarries.

*Sanitary Inspection.*—Houses inspected 174; defects remedied at 21. Improvement to cowsheds continues. Factories and workshops received 74 visits; defects remedied 5. Five pail closets converted to water-carriage system. Nuisances abated 10.

Notable sanitary improvement.	Discontinuance of water supply from Winewall well and reservoir.
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Sanitary requirement.	More attention to cleansing of factory closets.
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**Turton.**—(Area in acres, 17,335 ; Estimated Population, 12,720).—*Medical Officer of Health*, JAMES ROBINSON, M.D., L.S.Sc. ; *Salary*, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	15·3	*12·4	0·39	1·02	66
1913.....	15·7	14·3	0·39	0·47	125
Mean of 10 years					
1904-1913 .....	18·5	11·8	0·57	0·57	84
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·4	—1·9	nil.	+0·55	—59
<i>Ten Years' Average</i> .....	—3·2	+0·6	—0·18	+0·45	—18

\* Corrected by "factor" (1·0615)=13·1 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5, scarlet fever 33, enteric fever 2, erysipelas 5, pulmonary tuberculosis 28, other forms of tuberculosis 10. Deaths from non-notifiable diseases : whooping cough 2, diarrhoea 3.

*Hospital Accommodation.*—Arrangements made with the Bury, &c., Joint Board for the reservation of four beds for small-pox, and also for the treatment of ordinary infectious diseases. Cases treated : scarlet fever 4. Dr. Robinson states that more cases would have been sent to hospital but for the difficulty in overcoming the strong prejudice existing against removal.

*Disinfection.*—No apparatus ; steam appliances at Bury hospital used for clothing and bedding of patients removed. Houses disinfected 48.

*Water Supply* mainly from the Bolton Corporation waterworks. A few outlying houses and farms rely on wells and other private sources.



*Sewage.*—Treatment: at Belmont, septic tanks and continuous filtration; Bradshaw, precipitation tanks and land; Eagley, precipitation tanks and continuous filtration. At the Eagley works enlargement scheme in progress.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 400, unfit for habitation 2, demolished 2. Measures for preventing contamination of milk at the cowsheds still very inefficient. Visits to factories and workshops 74, defects remedied 3. Privies converted to water closets 86; 936 still remain. Council contribute one-half cost of conversion. Inspector (Mr. McMorris) served 241 notices; nuisances abated 188. Smoke observations 74.

Notable sanitary improvement. Conversion of privies.

Sanitary requirements. Further privy conversions; regulations in respect of cleanliness in milking and milk distribution.

**Tyldesley-with-Shakerley.**—(Area in acres, 2,490; Estimated Population, 15,750).—*Medical Officer of Health*, B. BLAKEMORE, M.R.C.S.; *Salary*, £80.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·6	*14·2	1·46	1·20	114
1913.....	26·0	18·2	5·39	1·01	190
Mean of 10 years					
1904-1913 .....	27·8	15·1	2·51	0·82	154
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+1·6	—4·0	—3·93	+0·19	—76
<i>Ten Years' Average</i> .....	—0·2	—0·9	—1·05	+0·38	—40

\* Corrected by "factor" (1·1091)=15·7 per 1,000.

Notification of Births Act in force. Health visitor paid

4,805 visits. “Babies’ Welcome,” inaugurated in April, proved very successful.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 16 (3 deaths), scarlet fever 138 (2 deaths), enteric fever 21 (3 deaths), erysipelas 19, puerperal fever 2, pulmonary tuberculosis 37, other forms of tuberculosis 20, ophthalmia neonatorum 6. Deaths from non-notifiable diseases: measles 2, whooping cough 1, diarrhœa 12. School closure resorted to on account of scarlet fever.

*Hospital Accommodation* provided at Astley, jointly with Leigh and Atherton. Cases treated: diphtheria 3, scarlet fever 87 (2 deaths), enteric fever 12, ophthalmia neonatorum 1.

*Disinfection.*—Steam apparatus at sanatorium. Houses fumigated 230, including 26 after tuberculosis.

*Water Supply* obtained from Manchester Corporation Thirlmere main.

*Sewage.*—Treatment: precipitation and land filtration. New scheme substituting percolating filters for land filtration nearing completion. Main outfall sewer being relaid owing to subsidence. Drains tested and flushed from time to time.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 350; unfit for habitation 23; closing order made 1. Unsound food condemned and destroyed: 770 lbs. meat and small quantity of fish. Factories and workshops received 150 visits; defects remedied 14. Privy middens converted to water closets 354, the Council contributing one-half the cost; 617 privies still remain. The Inspector (Mr. Smith) served 118 notices; nuisances remedied 893. Smoke observations 22; legal proceedings instituted in 1 case; order made to abate and to pay costs.

Notable sanitary improvements.      Conversion of privy middens to fresh-water closets ; relaying of defective sewers and drains.

Sanitary requirement.      Refuse destructor.

**Ulverston.**—(Area in acres, 3,172 ; Census Population, 9,552).—*Medical Officer of Health*, G. H. PATTERSON, M.R.C.S., D.P.H. ; *Salary*, £105.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·2	*14·1	1·88	0·62	98
1913.....	20·8	17·0	1·46	0·62	130
Mean of 10 years					
1904-1913 .....	22·1	15·0	1·11	0·85	112
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+1·4	—2·9	+0·42	nil.	—32
<i>Ten Years' Average</i> .....	+0·1	—0·9	+0·77	—0·23	—14

\* Corrected by " factor " ( $\cdot 9271$ ) = 13·0 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria 1, scarlet fever 5, enteric fever 1, erysipelas 9 (2 deaths), pulmonary tuberculosis 27, other forms of tuberculosis 5. Deaths from non-notifiable diseases : measles 2, whooping cough 10, diarrhoea 6. Prevalence of measles necessitated school closure.

*Hospital Accommodation.*—Arrangement with Barrow for treatment of small-pox ; other infectious diseases removed to High Carley joint hospital. Cases treated : diphtheria 1, scarlet fever 5.

*Disinfection.*—No proper apparatus. Houses disinfected 17.

*Water Supply* obtained from Pennington reservoir of Barrow Corporation.



*Sewage* discharged into sea. Scheme to prevent flooding of sewers in low lying parts of district prepared, and Local Government Board sanction obtained. Extension and relaying of sewers carried out.

*Scavenging* by Authority, satisfactory. New site for tipping refuse secured.

*Sanitary Inspection*.—Houses inspected 107, unfit for habitation and closing orders made 7; defects remedied 43. Slaughter-houses and cowsheds regularly inspected. Factories and workshops received 120 visits. Six privy middens converted to water closets; 251 still exist. The Inspector (Mr. Hague) served 103 statutory notices.

Sanitary requirement.

New outfall sewer.

**Upholland**.—(Area in acres, 4,686; Estimated Population, 5,240).—*Medical Officer of Health*, F. H. BROWNE, M.B.; *Salary*, £70.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	29·9	*9·9	0·57	0·19	70
1913.....	28·2	15·8	1·90	0·76	135
Mean of 10 years					
1904-1913 .....	31·6	15·3	1·68	0·66	136
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+1·7	—5·9	—1·33	—0·57	—65
<i>Ten Years' Average</i> .....	—1·7	—5·4	—1·11	—0·47	—66

\* Corrected by "factor" (1·0024)=9·9 per 1,000.

*Infectious Diseases*.—Cases notified: diphtheria 1, scarlet fever 38, enteric fever 20, erysipelas 3, puerperal fever 3, pulmonary tuberculosis 4, other forms of tuberculosis 4,

ophthalmia neonatorum 2. Deaths from non-notifiable diseases : measles 1, diarrhœa 2. Eight specimens bacteriologically examined. Dr. Browne again refers to the probability of enteric fever being contracted in colliery workings. School closure resorted to on account of prevalence of measles and scarlet fever.

*Hospital Accommodation.*—"Marquee," with 8 beds, provided for small-pox. No provision locally for other infectious diseases. Three cases of enteric fever sent to Wigan sanatorium.

*Disinfection.*—No apparatus. Houses fumigated 76.

*Water Supply* from deep well situate within the district. Arrangements made for augmenting supply, which is insufficient during periods of drought.

*Sewage.*—Treatment : septic tanks and filtration. Upwards of 440 yards of 9-inch sewers laid. Roby Mill and Appley Bridge areas without proper drainage systems.

*Scavenging*, mainly by Authority ; small area, by contractor ; satisfactory.

*Sanitary Inspection.*—Houses inspected 22, closing orders made 4, defects remedied at 6. Scheme for erection of eight workmen's dwellings in abeyance until after the war. To factories and workshops 37 visits of inspection. Ten privy middens converted to water closets ; 360 remain. The Inspector (Mr. Hunt) served 44 notices ; nuisances remedied 81.

Notable sanitary improvements.	Extension of sewers ; augmentation of water supply.
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Sanitary requirement.	Greater activity in conversion of privy middens.
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**Urmston.**—(Area in acres, 991 ; Estimated Population, 8,200).—*Medical Officer of Health*, G. E. FRYER, M.R.C.S. ; Salary, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17·1	*11·5	0·60	0·73	42
1913.....	21·3	10·1	1·87	1·25	93
Mean of 10 years					
1904-1913 .....	20·8	11·8	1·06	0·80	102
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—4·2	+1·4	—1·27	—0·52	—51
<i>Ten Years' Average</i> .....	—3·7	—0·3	—0·46	—0·07	—60

\* Corrected by "factor" (1·0798)=12·4 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 6 (1 death), scarlet fever 17, enteric fever 3 (2 deaths), puerperal fever 1, pulmonary tuberculosis 12, other forms of tuberculosis 5, ophthalmia neonatorum 3. Deaths from non-notifiable disease : diarrhoea 2. Specimens submitted for bacteriological examination : enteric fever 1, diphtheria 8, tuberculosis 17.

*Hospital Accommodation* for all diseases provided at Salford Corporation hospitals. Cases treated : diphtheria 1, scarlet fever 5, enteric fever 3 (2 deaths).

*Disinfection.*—Steam apparatus at Mode Wheel disinfection station, Salford, available. Houses fumigated 33.

*Water Supply* obtained from Manchester Corporation.

*Sewage.*—Treated at Urmston and Flixton joint works by septic tanks, storm tanks, continuous filtration, and humus tanks and land.

*Scavenging* by Authority, satisfactory.



*Sanitary Inspection.*—Houses inspected 54, defects remedied at 43. Several cowsheds deficient in air space. Arrangements made for veterinary inspection of cows. Factories and workshops received 43 visits. Four pail closets and 71 privies converted to water closets; 148 privy middens remain. The Inspector (Mr. Heath) served 67 notices; nuisances remedied 244.

Notable sanitary improvement.      Conversion of privies to water closets.

Sanitary requirement.      Continuance of privy conversion.

**Walton-le-Dale.**—(Area in acres, 4,658; Estimated Population, 12,352).—*Medical Officer of Health*, C. J. TRIMBLE, L.R.C.P.E., D.P.H.; *Salary*, £50.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·4	*13·5	0·48	0·72	114
1913.....	22·0	13·6	1·45	0·89	147
Mean of 10 years					
1904-1913 .....	25·0	14·6	1·29	0·95	129

*Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	—3·6	—0·1	—0·97	—0·17	—33
<i>Ten Years' Average</i> .....	—6·6	—1·1	—0·81	—0·23	—15

\* Corrected by "factor" (1·0469)=14·1 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 13 (1 death), scarlet fever 102 (2 deaths), enteric fever 14 (1 death), erysipelas 12, pulmonary tuberculosis 20, other forms of tuberculosis 2. Deaths from non-notifiable disease: diarrhoea 2. Scarlet fever prevalent throughout the year. Measles attacked a number of children attending St. Patrick's School, closure of which checked the spread.

*Hospital Accommodation.*—For small-pox, Bradkirk hospital, 8 beds. School Lane hospital—20 beds—for other infectious diseases. Cases treated: diphtheria 5, scarlet fever 95 (1 death), enteric fever 13. Dr. Trimble calls attention to the want of an ambulance for the removal of small-pox cases.

*Disinfection.*—Steam apparatus at hospital; 161 houses and 584 parcels of bedding disinfected; 51 lots of bedding destroyed. Schools fumigated 7.

*Water Supply* obtained from a well at Brindle; Thirlmere-Manchester Aqueduct; and a new borehole at Bamber Bridge. The consumption approximates 18 gallons per head daily. Mains extended by 730 lineal yards.

*Sewage.*—Treatment: precipitation and filtration. Main outfall sewer at Walton Green reconstructed. Sewer ventilating shafts fixed at School Lane.

*Scavenging* by Authority, with the exception of Higher Walton area. The Medical Officer of Health states “There can be no comparison between the carrying out of cleansing operations when performed under proper supervision by a Local Authority, and the work when undertaken by tender,” and strongly urges the Council to take over the scavenging of Higher Walton. Six back passages at Lostock Hall paved and drained.

*Sanitary Inspection.*—Houses inspected under Section 17 of the Housing Act 267, unfit for habitation 56. Deficiency of housing accommodation; schemes for provision of houses at Bamber Bridge and Lostock Hall under consideration. Back yards flagged 148. Privy middens converted to water closets 80, pails to water closets 22. Council pay half-cost of conversions; 445 privy middens, and 1,035 pail closets remain to be dealt with. Slaughter-houses received 42 visits;

dairies and cowsheds 25 ; factories and workshops 58. The Inspector (Mr. Baron) served 1,106 notices ; nuisances remedied 1024.

Notable sanitary improvements.	Conversion of privy middens ; flagging of back yards and passages ; extension of water mains.
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Sanitary requirements.	Further conversion of privies and pail closets ; provision of small-pox ambulance ; Council to undertake scavenging of Higher Walton ; paving of yards and back passages.
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**Wardle.**—(Area in acres, 3,192 ; Estimated Population, excluding Public Institutions, 4,720).—*Medical Officer of Health*, G. MACGILL, L.R.C.P.E. ; *Salary*, £40.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	13·9	*16·7	0·77	0·51	148
1913.....	14·5	12·6	1·21	1·21	133
Mean of 10 years					
1904-1913 .....	16·3	13·6	0·98	0·87	126

### *Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—0·6	+4·1	—0·44	—0·70	+15
<i>Ten Years' Average</i> .....	—2·4	+3·1	—0·21	—0·36	+22

\* Corrected by " factor " (1·0301)=17·2 per 1,000.

Notification of Births Act adopted and part-time health visitor appointed.



*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 2 (1 death), scarlet fever 13, erysipelas 4 (1 death), pulmonary tuberculosis 3, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: whooping cough 1, diarrhoea 1.

*Hospital Accommodation.*—For small-pox, arrangement with Bury, &c., Joint Hospital Board; ordinary infectious diseases treated at Littleborough, Milnrow, and Wardle joint hospital at Smithy Bridge. Cases treated: diphtheria 2 (1 death), scarlet fever 11.

*Disinfection.*—Steam apparatus at joint hospital available. Houses disinfected 18.

*Water Supply* obtained mainly from Rochdale Corporation; outlying farms and cottages depend on spring and well water.

*Sewage.*—Two outfall works. Treatment: Higher works, precipitation tanks, storm tanks, continuous filtration, and humus tanks; Lower works, precipitation tanks, continuous filtration, humus tanks, and land.

*Scavenging*, except for outlying farms, performed satisfactorily by Authority.

*Sanitary Inspection.*—Houses inspected 54, defects remedied at 32. Visits to cowsheds 100; improvements in ventilation and lighting effected. Inspections of factories and workshops 23. Ten privy middens and 4 pail closets converted to water closets; 212 of the former and 256 pails still remain. The Inspector (Mr. Hurst) served 21 notices; nuisances remedied 67. Smoke observations 2.

Sanitary requirements.

Paving of private streets and back passages; conversion of privy and pail closets.

**Waterloo-with-Seaforth.**—(Area in acres, 986 ; Estimated Population, 29,079).— *Medical Officer of Health*, F. F. GERMAN, L.R.C.P.E. ; *Salary*, £130.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	22·2	*14·2	1·13	1·10	85
1913.....	22·2	12·8	1·12	1·12	97
Mean of 10 years					
1904-1913 .....	23·8	12·0	1·20	0·84	104
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	nil.	+1·4	+0·01	—0·02	—12
<i>Ten Years' Average</i> .....	—1·6	+2·2	—0·07	+0·26	—19

\* Corrected by " factor " (1·0190)=14·4 per 1,000.

Notification of Births Act in operation ; part-time health visitor appointed.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 37 (5 deaths), scarlet fever 164 (3 deaths), enteric fever 6 (2 deaths), erysipelas 15 (2 deaths), puerperal fever 1, cerebro-spinal meningitis 1, pulmonary tuberculosis 69, other forms of tuberculosis 45, ophthalmia neonatorum 6. Deaths from non-notifiable diseases : measles 6, whooping cough 1, diarrhoea 16. Two schools closed owing to outbreak of measles. Arrangement made with St. Paul's Eye Hospital, Liverpool, for treatment of ophthalmia neonatorum.

*Hospital Accommodation.*—Liverpool Corporation infectious diseases hospitals available Cases treated : diphtheria 21 (4 deaths), scarlet fever 78 (1 death), enteric fever 3 (1 death).

*Disinfection.*—Washington Lyon's steam apparatus at Council's yard used 710 times. Rooms disinfected 336, schools 9.

*Water Supply* obtained from Liverpool Corporation.

*Sewage* discharged without treatment into estuary of River Mersey. Sewers constantly flushed; smoke test applied to house and school drains 278 times.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected under Housing Acts 84; defects at each house remedied. Cowsheds received 149 visits; 2 improved in ventilation. Fifty-one samples of milk submitted for bacteriological examination; 4 reported as tuberculous. Inspections of factories and workshops 77; defects found and remedied 74. Closet accommodation—with exception of 10 pail closets—on water-carriage system; 10,071 fresh-water closets. Ashpits abolished 136, replaced by 250 ashbins. The Inspector (Mr. Cannell) served 659 notices; nuisances remedied 2,986. Legal proceedings taken in one case; work completed and summons withdrawn on payment of costs. Smoke observations 6.

**Westhoughton**.—(Area in acres, 5,560; Estimated Population, 15,200).—*Medical Officer of Health*, W. H. LEIGH, M.R.C.S.; *Salary*, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	27·4	*14·8	1·64	0·65	117
1913.....	28·0	14·6	2·56	0·46	170
Mean of 10 years					
1904-1913 .....	28·7	14·1	1·73	0·56	133
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·6	+0·2	—0·92	+0·19	—53
<i>Ten Years' Average</i> .....	—1·3	+0·7	—0·09	+0·09	—16

\* Corrected by "factor" (1·0725)=15·8 per 1,000.

Notification of Births Act in force. Systematic visiting by two district nurses, who act as health visitors.



*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 33 (5 deaths), scarlet fever 38 (1 death), enteric fever 11 (2 deaths), erysipelas 22 (1 death), puerperal fever 2 (1 death), pulmonary tuberculosis 21, other forms of tuberculosis 9, ophthalmia neonatorum 2. Deaths from non-notifiable diseases: measles 9, whooping cough 2, diarrhoea 6. School closure resorted to owing to prevalence of measles. Specimens submitted for bacteriological examination: enteric fever 10, tuberculosis 12.

*Hospital Accommodation.*—For small-pox, corrugated iron building at Roger's Farm—12 beds; Fall Birch (Horwich) joint hospital available for other infectious cases. Cases treated: diphtheria 22 (3 deaths), scarlet fever 32, enteric fever 10.

*Disinfection.*—Steam apparatus at hospital. Houses disinfected 128.

*Water Supply* obtained from Bolton Corporation. Water tower at Snydale Hill completed; “adequate supply of water now available for the whole district.”

*Sewage.*—About 90 per cent. of the sewage treated at main outfall works, Roger's Farm, by precipitation tanks, continuous filtration, and land; extension and alteration of these works in progress. Remainder of sewage dealt with by land irrigation at Dog Holes and Marsh Brook Farm, and by septic tank, storm filter, and continuous filtration at Dicconson Lane works. One section of sewers discharges into Leigh and Atherton joint sewerage system. New sewer, Hulton Lane, completed.

*Scavenging* undertaken by Authority in six of the fourteen sub-divisions; remainder performed by contract. Scheme for disposing of refuse by means of pulverising plant submitted to Local Government Board.

*Sanitary Inspection.*—Houses inspected 83, defects remedied at 74, houses demolished 2. Deficiency of housing accommodation; scheme for erection of dwelling-houses under consideration by Council. Cowsheds received 115 visits, slaughter-houses 41, bakehouses 46. Inspection of factories and workshops 46, defects remedied 2. Privy middens converted to water closets 153; 2,188 still exist. The Inspector (Mr. Green) served 13 notices; nuisances abated 135. Smoke observations 27.

Notable sanitary improvements.	Extension of sewer, Hulton Ward; conversion of privies; enlargement of sewage outfall works commenced.
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Sanitary requirements.	Abolition of privy middens; paving of back streets.
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**Whitefield.**—(Area in acres, 1,404; Estimated Population, 7,036).—*Medical Officer of Health*, A. J. YOUNG, L.R.C.P.E.; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17·6	*13·3	0·56	0·99	120
1913.....	18·6	13·9	0·85	0·28	145
Mean of 10 years					
1904-1913 .....	21·0	15·4	1·35	0·70	120
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—1·0	—0·6	—0·29	+0·71	—25
<i>Ten Years' Average</i> .....	—3·4	—2·1	—0·79	+0·29	nil.

\* Corrected by "factor" (1·0821)=14·3 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 2 (1 death), scarlet fever 21, erysipelas 3,

puerperal fever 1, pulmonary tuberculosis 13, other forms of tuberculosis 13, ophthalmia neonatorum 4. Deaths from non-notifiable diseases : measles 1, diarrhœa 2.

*Hospital Accommodation* provided by Bury and District Joint Hospital Board for isolation of all infectious diseases. Cases treated : diphtheria 1, scarlet fever 11.

*Disinfection*.—Steam apparatus at Bury joint hospital available. One school and 32 houses disinfected.

*Water Supply* obtained from Bury and District Joint Water Board's reservoirs.

*Sewage* treated at two outfall works ; by means of precipitation tanks, storm tanks, continuous filtration, and humus tanks at main outfall works, and by sedimentation tank and continuous filtration at Park Lane. Scheme in preparation for reconstruction of latter works. An area at Park Lane without drainage system—scheme now in preparation. Sewers periodically flushed.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection*.—Houses inspected under Section 17 of 1909 Act 7, all unfit for habitation and closing orders made ; demolition orders, with respect to 7 houses previously condemned, carried out. Deficiency of housing throughout the district ; Council's scheme for the erection of 58 artisan's dwellings, sanctioned by Local Government Board, but in abeyance. Cowsheds received 37 visits, fairly satisfactory ; examination of cattle by veterinary surgeon. Ten samples of milk submitted for bacteriological examination, 4 found to be " tubercular " ; cows subsequently slaughtered. Visits to slaughter-houses 162 ; food seized and destroyed 1,869 lbs., included parts of several and two whole carcasses of beasts.



Prosecution for being in possession of “stripped” tubercular carcase ; result, £20 fine, £10 costs. Inspections of factories and workshops 90, defects found 6, remedied 5. Sixty water closets substituted for 25 privy middens ; 422 of latter remain. The Inspector (Mr. Shaw) served 82 notices ; nuisances abated 282. Smoke observations 36.

Notable sanitary improvement.      Conversion of privy middens to water closets.

Sanitary requirements.      Additional housing accommodation ; sewerage of Park Lane.

**Whitworth.**—(Area in acres, 4,483 ; Estimated Population, 9,000).—*Medical Officer of Health*, ALEXANDER WELSH, M.D. ; *Salary*, £40.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·5	*14·5	0·44	1·22	125
1913.....	18·3	16·4	nil.	1·22	115
Mean of 10 years					
1904-1913 .....	19·1	16·5	1·00	1·24	128
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+0·2	—1·9	+0·44	nil.	+10
<i>Ten Years' Average</i> .....	—0·6	—2·0	—0·56	—0·02	—3

\* Corrected by “factor” (1·0520)=15·2 per 1,000.

Notification of Births Act adopted and part-time health visitor appointed.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 10 (1 death), scarlet fever 29, enteric fever 3, erysipelas 12 (1 death), puerperal fever 1 (fatal), pulmonary tuberculosis 26, other forms of tuberculosis 16, ophthalmia neonatorum 2. Deaths from non-notifiable disease: whooping cough 3. Four specimens submitted for bacteriological examination.

*Hospital Accommodation.*—Cottage hospital—12 beds—available for small-pox; no provision for other infectious diseases.

*Disinfection.*—No apparatus. Houses fumigated 57.

*Water Supply* mainly from Rochdale Corporation.

*Sewage.*—Treatment: precipitation tanks, continuous filtration, and land irrigation.

*Scavenging* by Authority, satisfactory.

*Sanitary Inspection.*—Houses inspected 157, unfit for habitation and closing orders made 11. New school opened, and plans passed for erection of another; two old schools closed. Cowsheds “improved.” Diseased meat surrendered and destroyed 355 lbs. Visits to factories and workshops 91, defects remedied 1. Closet accommodation mainly on pail system, of which type there are 1,471 in the district. The Inspector (Mr. Cordingley) served 49 notices; nuisances remedied 255. Smoke observations 2.

Notable sanitary improvement.	Better sanitary condition of farm buildings.
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Sanitary requirement.	Houses with three bedrooms.
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**Widnes (Borough).** — (Area in acres, 3,093; Estimated Population, 32,572).— *Medical Officer of Health*, A. JONES, M.D., D.P.H.; *Salary*, £320.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	30·4	*17·4	2·70	1·50	127
1913.....	31·9	17·7	4·15	1·39	132
Mean of 10 years					
1904-1913 .....	31·7	17·0	2·50	0·76	148

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	—1·5	—0·3	—1·45	+0·11	—5
<i>Ten Years' Average</i> .....	—1·3	+0·4	+0·20	+0·74	—21

\* Corrected by “ factor ” (1·0547)=18·3 per 1,000.

Notification of Births Act in force and health visitor appointed.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 39 (3 deaths), scarlet fever 134 (2 deaths), erysipelas 16, puerperal fever 5 (3 deaths), poliomyelitis 1, pulmonary tuberculosis 99, other forms of tuberculosis 28, ophthalmia neonatorum 27. Deaths from non-notifiable diseases: measles 22, whooping cough 15, diarrhoea 46. No cases of enteric fever notified, for the first time in the history of the Borough. Dr. Jones states “as soon as the water-carriage system was introduced into the Borough, the notification rate for enteric fever commenced to decrease and, with few exceptions, it has steadily continued to decline until we have now a complete absence of the disease.” Specimens submitted for bacteriological examination: sputum 22, diphtheria 88.



*Hospital Accommodation* provided for all infectious diseases ; for small-pox at Barrow's Green—8 beds available, and at Crow Wood—36 beds—for other diseases. Cases treated : diphtheria 35 (2 deaths), scarlet fever 106 (1 death).

*Disinfection.*—Steam apparatus at hospital. Houses fumigated 241 ; articles of clothing, bedding, &c., disinfected 7,990 ; notices served under Section 5 of the Infectious Diseases Prevention Act, 1890, in respect to 19 houses.

*Water Supply* obtained by pumping from deep wells in the sandstone at Stocks Well, Netherley, and Belle Vale.

*Sewage* conveyed by three main outfall sewers into estuary of River Mersey. Syphons and tank waggon provided for flushing sewers.

*Scavenging* by Authority, satisfactory. Refuse destructor in course of construction.

*Sanitary Inspection.*—Houses inspected under Section 17 of the Housing and Town Planning Act 210 ; one house represented as unfit for habitation. Canal boats inspected 5. Considerable quantity of meat, fish, fruit, and vegetables destroyed as unfit for human food. Inspection of factories and workshops 175, defects found 19. Conversion of privy middens to water closets 1,474, leaving 906 to be dealt with ; the Corporation contribute one-half cost of conversion. The Inspector (Mr. Lowe) served 698 notices ; nuisances remedied 1,660. No smoke observations taken.

Notable sanitary improve-	Conversion of privies.
ment.	

Sanitary requirements.	Further conversion of privies and ashpits ; paving of yards ; refuse destructor.
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**Withnell.**—(Area in acres, 3,705 ; Estimated Population, 3,410).—*Medical Officer of Health*, S. WALKER MACLEAN, M.B. ; *Salary*, £25.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·0	*11·1	0·29	0·29	123
1913.....	21·4	9·9	0·29	0·58	13
Mean of 10 years					
1904-1913 .....	20·9	11·9	0·92	0·50	100
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—2·4	+1·2	nil.	—0·29	+110
<i>Ten Years' Average</i> .....	—1·9	—0·8	—0·63	—0·21	+23

\* Corrected by "factor" (1·0756)=11·9 per 1,000.

"Babies' Welcome"—a voluntary organisation—doing useful work in connection with child welfare.

*Infectious Diseases.*—Cases notified : scarlet fever 12, erysipelas 1, pulmonary tuberculosis 4, other forms of tuberculosis 3. Death from non-notifiable disease : measles 1.

*Hospital Accommodation.* — For ordinary infectious diseases, provision for 24 patients at Council's own hospital. One bed retained at Finnington for small-pox. Cases treated : scarlet fever 10.

*Disinfection.*—Musgrave's steam apparatus at hospital. Houses fumigated 12.

*Water Supply* obtained from the Liverpool Corporation reservoir.

*Sewage.*—Treatment at Abbey Village : precipitation, filtration, and irrigation ; Brinscall : settlement and sprinkler bed ; Withnell Fold : septic tank and bacteria beds.

*Scavenging* satisfactorily performed by Authority. Refuse disposed of at farms and tips.

*Sanitary Inspection*.—Houses inspected numbered 70 ; defects remedied without making closing orders 2 ; one house demolished. The Medical Officer of Health advocates the provision of an adequate supply of attractive houses, so that young couples may secure homes at the outset of their married life. Deficiency of houses not so marked since August, owing to enlistments. Six visits paid to factories and workshops. Privy middens number 68, pail closets 555. Five pails converted to water closets. The Inspector served 26 notices ; nuisances remedied 26. Smoke observations 6.

Notable sanitary improve-      Drainage and paving.  
ment.

Sanitary requirements.      Abolition of privies and pail  
closets ; new disinfecting  
apparatus at hospital ; public  
abattoir.

**Worsley**.—(Area in acres, 5,413 ; Estimated Population, 14,380).—*Medical Officer of Health*, R. SAYERS, M.D. ; *Salary*, £70.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·0	*11·2	0·97	0·69	129
1913.....	20·7	11·8	0·84	0·35	94
Mean of 10 years					
1904-1913 .....	21·7	13·1	1·42	0·74	120
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—2·7	—0·6	+0·13	+0·34	+35
<i>Ten Years' Average</i> .....	—3·7	—1·9	—0·45	—0·05	+9

\* Corrected by " factor " (1·1100)=12·4 per 1,000.

*Infectious Diseases*.—Cases notified : diphtheria and



membranous croup 10, scarlet fever 65 (2 deaths), enteric fever 6, erysipelas 5, poliomyelitis 1, pulmonary tuberculosis 11, other forms of tuberculosis 9. Deaths from non-notifiable diseases : whooping cough 7, diarrhœa 5. During November and December scarlet fever prevalent ; school closure adopted. Eight specimens submitted for bacteriological examination.

*Hospital Accommodation.*—For small-pox, jointly with Swinton and Pendlebury ; for other infectious diseases, 6 beds retained at Salford Corporation hospital. Cases treated : diphtheria 1, scarlet fever 5 (1 death), enteric fever 1.

*Disinfection.*—Steam apparatus at Salford sanatorium. Houses disinfected 98.

*Water Supply* obtained from mains of Bolton and Manchester Corporations.

*Sewage.*—Treatment : precipitation and land irrigation at Barton Old Hall and Boothstown ; septic tanks, continuous filtration, and land irrigation at Wardley. Sewers flushed periodically.

*Scavenging* by contract, said to be performed satisfactorily.

*Sanitary Inspection.*—Houses inspected 57 ; unfit for habitation 30 ; in each instance defects repaired without resorting to closing orders. To factories and workshops 79 visits paid ; defects remedied 11. Canal boats inspected 51, contraventions 9. Privy middens converted to water closets 108, leaving 2,125 to be dealt with. The Inspector (Mr. Willcock) served 98 notices ; nuisances remedied 256. Smoke observations 16.

Notable sanitary improvement.	Conversion of privies.
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Sanitary requirements.	Further privy conversions ; destructor ; mortuary ; sanitary convenience in Walkden for females.
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## RURAL DISTRICTS.

**Barton-upon-Irwell.** — (Area in acres, 6,793; Estimated Population, 9,752).—*Medical Officer of Health*, D. W. DAVIDSON, M.B.; *Salary*, £80.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·2	*11·3	0·61	0·61	96
1913.....	20·8	12·5	1·25	0·41	110
Mean of 10 years					
1904-1913 .....	23·5	12·8	1·25	0·61	92

### *Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	—0·6	—1·2	—0·64	+0·20	—14
<i>Ten Years' Average</i> .....	—3·3	—1·5	—0·64	nil.	+4

\* Death-rate for 1914 corrected, for difference in sex and age constitution of population, by "factor" (1·0196) supplied by Registrar-General = 11·5 per 1,000.

Clifton township had the highest birth-rate (21·2) and Davyhulme the lowest (15·6); the latter had the lowest death-rate (9·1) and Flixton the highest (12·7).

†*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 4, scarlet fever 47 (2 deaths), enteric fever 1, erysipelas 11, puerperal fever 1, pulmonary tuberculosis 12, other forms of tuberculosis 7. Deaths from non-notifiable diseases: whooping cough 2, diarrhoea 2. Specimens submitted for bacteriological examination: diphtheria 3, tuberculosis 8.

† NOTE.—In the Summaries the deaths from tuberculosis are not given as they often do not relate to the cases actually notified during the year. The deaths are given in the Tables II. and IV. appended.

*Hospital Accommodation.*—Salford Corporation hospitals available ; 2 beds reserved at Drinkwater hospital for small-pox, and 5 at Ladywell sanatorium for other infectious diseases. Cases treated : diphtheria 1, scarlet fever 26 (2 deaths), puerperal fever 1.

*Disinfection.*—Steam apparatus at Salford disinfecting station (Mode Wheel) available. Houses fumigated 41.

*Water Supply* obtained from Manchester and Bolton for whole district, with the exception of a few scattered dwellings.

*Sewage.*—Treatment : Coppice Clough works and Clifton Unity Brook works, precipitation tanks and continuous filtration. Flixton, septic tanks, storm tanks, continuous filtration, humus tanks, and land at the Urmston and Flixton joint outfall works. Bulk of Davyhulme sewage turned into Manchester Corporation main. Reconstruction of Coppice Clough outfall works, and section 2 of Davyhulme main drainage scheme in abeyance.

*Scavenging.*—Flixton by Authority, who contract for team labour ; Clifton and Davyhulme by contract ; Barton Moss undertaken by occupiers, mostly farmers.

*Sanitary Inspection.*—Houses inspected 130, unfit for habitation and closing orders made 2, defective houses remedied 61. Slaughter-houses, which received 64 visits, are satisfactory, but “ so scattered that it is impossible to carry out a thorough inspection of meat.” Visits to cowsheds 94 ; a number improved in lighting, ventilation, and drainage. Inspections of factories and workshops 39. Privies converted to water closets 57 ; over 550 privy middens and 140 pail closets still remain. The Inspector (Mr. Child) served 92 notices ; nuisances remedied 477. Two ejectment orders obtained under Housing Acts. Smoke observations 29.



Notable sanitary improvement.      Completion of re-drainage of houses in sewered portion of Davyhulme.

Sanitary requirement.      Sewerage scheme for portion of Davyhulme.

**Blackburn.**—(Area in acres, 20,150 ; Census Population, excluding Public Institutions, 8,920).—*Medical Officer of Health*, W. R. POLLARD, L.R.C.P.E. ; *Salary*, £60.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate	
1914.....	21·4	*13·3	0·67	0·67	89
1913.....	20·1	12·8	1·23	0·67	105
Mean of 10 years					
1904-1913 .....	20·2	13·2	0·77	0·68	98

*Increase or Decrease*

*in 1914 on—*

<i>Previous Year</i> .....	+1·3	+0·5	—0·56	nil.	—16
<i>Ten Years' Average</i> .....	+1·2	+0·1	—0·10	—0·01	—9

\* Corrected by " factor " (1·0427)=13·8 per 1,000.

The townships of Dinckley, Witton, Tockholes, and Eccleshill had the highest death-rates, and Ramsgreave, Livesey, Mellor, and Wilpshire the lowest.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5 (1 death), scarlet fever 60, enteric fever 1, erysipelas 5, pulmonary tuberculosis 19, other forms of tuberculosis 1. Deaths from non-notifiable diseases : measles 1, diarrhoea 4. School closure resorted to in the township of Billington on account of scarlet fever, and in Tockholes owing

to an outbreak of measles. Specimens submitted for bacteriological examination: diphtheria 4, tuberculosis 1, milk 2.

*Hospital Accommodation.*—Patients occasionally removed, by arrangement, to isolation hospitals at Blackburn, Chorley, and Withnell. Cases treated: scarlet fever 9.

*Disinfection.*—No apparatus. Houses and schools disinfected 56.

*Water Supply.*—Mellor Brook supplied by Manchester Corporation; other parts of the district from the mains of Blackburn Corporation, private reservoirs, or wells.

*Sewage.*—Treatment: at Langho, septic tanks, percolators, and irrigation; at Wilpshire, septic tanks, sprinklers, and sedimentation; at Mellor Brook, closed septic tanks and single contact filters; at Mellor, Eccleshill, Pleasington, and Livesey, tanks and land irrigation.

*Scavenging.*—Livesey by contract; remainder of district by owners or tenants.

*Sanitary Inspection.*—Houses inspected 200, unfit for habitation 3, defects remedied at 75 houses; one insanitary house at Mellor demolished, and a back-to-back house at Billington closed. Visits to slaughter-houses 145. To cowsheds 309 visits; condition improved. Factories and workshops received 18 inspections. Two privies converted to pail closets, 13 privies and 10 pail closets to water closets. The Inspector (Mr. Eccleston) served 135 notices; nuisances remedied 175. Smoke observations 11.

Sanitary requirements.

Better provision for hospital isolation; disinfecting apparatus; conversion of privies.

**Burnley.**—(Area in acres, 41,774; Estimated Population, 20,500).—*Medical Officer of Health*, HENRY J. ROBINSON, B.A., M.R.C.S.; *Salary*, £150.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	16·8	*12·7	1·21	0·63	112
1913.....	16·9	13·7	0·78	0·53	123
Mean of 10 years					
1904-1913 .....	20·7	12·9	0·78	0·64	118
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·1	—1·0	+0·43	+0·10	—11
<i>Ten Years' Average</i> .....	—3·9	—0·2	+0·43	—0·01	— 6

\* Corrected by "factor" (1·0724)=13·6 per 1,000.

By an Order of the County Council, confirmed by the Local Government Board 10th March, 1914, an area of 77 acres, with a population of 70, transferred from the township of Cliviger to the township of Worsthorne-with-Hurstwood.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 13 (2 deaths), scarlet fever 55 (1 death), enteric fever 6 (1 death), erysipelas 11, puerperal fever 1, cerebro-spinal meningitis 1, pulmonary tuberculosis 17, other forms of tuberculosis 13. Deaths from non-notifiable diseases: measles 12, whooping cough 3, diarrhoea 6. Scarlet fever specially prevalent throughout the year, but more particularly in December. Three specimens submitted for bacteriological examination. Prevalence of measles necessitated school closure.

*Hospital Accommodation.*—Joint hospital for ordinary diseases at Kibble Bank, Burnley, and for small-pox at Crown Point. Cases treated: diphtheria 8, scarlet fever 27 (1 death), enteric fever 3.

*Disinfection.*—Steam apparatus (Burnley Corporation) available. Rooms disinfected 99.



*Water Supply* obtained mainly from neighbouring districts. Council's own waterworks supply four townships. Negotiations in progress for purchase of lands to provide additional water for Briercliffe. At Newchurch, boring experiments proved successful, and further steps (guaging and analyses) are proceeding. No systematic supply at Goldshaw Booth and Roughlee Booth, but Nelson Corporation have agreed to supply Crow Trees area of Roughlee. The water supply to Read needs improvement.

*Sewage.—Treatment:* Burnley Corporation sewers receive sewage from six townships. Four townships possess outfall works, viz.: Huncoat, open septic tanks and double contact beds; Sabden, continuous settlement, sprinklers, and irrigation; Worsthorpe and Foulridge, septic tanks, percolating filters, and humus tanks. Part of Altham connected with the Accrington and Church outfall works at Coppy Clough. Inefficiency of the Huncoat works necessitated an application to the Local Government Board for sanction to loan of £1,200 for improvement.

*Scavenging.*—Blacko, Foulridge, and Ightenhill carried out satisfactorily by contract; other townships by Local Authority.

*Sanitary Inspection.*—Houses inspected 102, unfit for habitation 7, defects remedied without closing orders 15, after closing orders 2. Much improvement to property in Sabden. Water supplies of schools unsatisfactory at Newchurch-in-Pendle and Roughlee, but shortly to be dealt with. Cowsheds, on the whole, satisfactory, but certain farms remain in an insanitary condition. Action taken in two cases to prohibit sale of tuberculous milk and to isolate the affected cows. Factories and workshops received 59 visits, defects found 9, remedied 5. Conversion of privy middens to water closets 51, to pails 3. Pail closets converted to

water-carriage system 70. The Inspector (Mr. Atkinson) served 169 informal and 57 statutory notices ; nuisances abated 595.

Notable sanitary improvements.	Completion of sewage disposal works ; conversion of privies and re-draining at Foulridge ; sewerage of Habergham Eaves ; new water main and street paving at Briercliffe.
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Sanitary requirements.	New water supplies for Roughlee and Newchurch-in-Pendle ; further conversion of privies at Foulridge ; sewage disposal works for Wheatley Lane and Higham.
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**Bury.**—(Area in acres, 12,016 ; Estimated Population, 9,330).—*Medical Officer of Health*, J. W. Cook, M.B. ; *Salary*, £95.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·5	*13·5	0·64	0·64	98
1913.....	19·6	12·0	0·75	0·97	66
Mean of 10 years					
1904-1913 .....	20·4	12·9	1·18	0·65	103
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—0·1	+1·5	—0·11	—0·33	+32
<i>Ten Years' Average</i> .....	—0·9	+0·6	—0·54	—0·01	—5

\* Corrected by " factor " (1·0430)=14·0 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and

membranous croup 9 (3 deaths), scarlet fever 71, enteric fever 2, erysipelas 4, puerperal fever 1 (fatal), pulmonary tuberculosis 11, other forms of tuberculosis 4, relapsing fever 1. Deaths from non-notifiable disease : diarrhœa 3. Prevalence of scarlet fever from September to November. Specimens bacteriologically examined : enteric fever 1, diphtheria 3, sputum 3.

*Hospital Accommodation.*—Provision for all infectious diseases made by the Bury and District Joint Hospital Board, of which this district is a constituent authority. Cases treated : diphtheria 6 (1 death), scarlet fever 28, enteric fever 1.

*Disinfection.*—Thresh's steam apparatus at Bury hospital. Houses fumigated 110.

*Water Supply* provided by the Bury and District Joint Water Board, Heywood and Middleton Water Board, and the Bolton Corporation. Most farms and some outlying parts rely on private supplies.

*Sewage.*—Treatment : by septic tanks, and continuous filtration, at eight outfall works ; at Croft Lane, land filtration also available. Extension scheme at Prestolee postponed owing to the war. Birtle and Walmersley-cum-Shuttleworth without drainage systems.

*Scavenging.*—Owners arrange for farmers to undertake the work, which is said to be performed satisfactorily.

*Sanitary Inspection.*—Houses inspected 126, unfit for habitation 10, defects remedied 107, dwellings demolished 7. Greater cleanliness in the immediate neighbourhood of cowsheds desirable. Factories and workshops received 76 visits, defects found 10, remedied 9. Privy middens number 880, conversions to water closets 21. Closet accommodation at schools mainly on privy system ; abolition



strongly recommended by Medical Officer of Health. The Inspector (Mr. Hurst) served 106 notices ; nuisances abated 205. Smoke observations 8.

Sanitary requirement.                      Conversion of privy middens  
to water closets where  
possible.

**Chorley.**—(Area in acres, 39,988 ; Estimated Population, 22,300).—*Medical Officer of Health*, J. A. HARRIS, M.D. (Lond.) ; *Salary*, £150.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·0	*12·7	0·62	0·71	124
1913.....	24·2	12·5	1·63	0·59	123
Mean of 10 years					
1904-1913 .....	24·4	13·8	1·10	0·75	113
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·2	+0·2	—1·01	+0·12	+1
<i>Ten Years' Average</i> .....	—1·4	—1·1	—0·48	—0·04	+11

\* Corrected by " factor " (1·0431)=13·2 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 17 (3 deaths), scarlet fever 26, enteric fever 14 (2 deaths), erysipelas 13 (1 death), puerperal fever 1 (fatal), pulmonary tuberculosis 32, other forms of tuberculosis 4. Deaths from non-notifiable disease : diarrhoea 9. The prevalence of measles at Bretherton in January necessitated closure of one school.

*Hospital Accommodation* provided at Heath Charnock—36 beds—jointly with Chorley Borough, Adlington, and

Leyland. No provision for small-pox at present, the Joint Board's arrangement with Blackburn having been terminated. Cases treated: diphtheria 4, scarlet fever 23, enteric fever 6 (1 death).

*Disinfection.*—Steam disinfectors at Chorley (B.) available. Houses fumigated 63, schools 5.

*Water Supply.*—In 15 townships public supply laid on; in remaining townships water obtained from wells and springs. In Mawdsley, water supply is “doubtful.”

*Sewage.*—Treatment: Coppull, Wheelton, and Whittle-Woods by precipitation, filtration, and irrigation; Eccleston and Heath Charnock by precipitation and irrigation, and by precipitation only at Euxton and one portion of Coppull. Anderton and portion of Heath Charnock connected to the sewerage system of the Adlington Urban District. Several of the outfall works are too small to meet the growing requirements. The remaining townships are without sewage works, sewage being conveyed to septic tanks, cesspools, and water courses.

*Scavenging* in 7 townships by contract, elsewhere by occupiers.

*Sanitary Inspection.*—Houses inspected under Housing Acts 46, closing orders 2. Plans for 37 new houses and 2 schools sanctioned by the Council. Factories and workshops visited 19, defects remedied 8. Two carcasses of beef seized and destroyed. Thirty privy middens converted to water closets and 18 to pails; over 2,262 still exist. The Inspector (Mr. H. F. Froes) served 140 notices; nuisances remedied 278.

Sanitary requirements.

Slaughter-house bye-laws for all the more populous townships; scavenging by contract of several townships.

**Clitheroe (Lancashire Portion).** — (Area in acres, 32,168 ; Census Population, 6,342).—*Medical Officer of Health*, to July 26th, T. THORNTON MACKLIN, M.D., D.P.H. ; from July 27th, J. M. POSTLETHWAITE, M.A., M.B., *Salary*, £50.

*Vital Statistics.*

PER 1,000 OF POPULATION.

	Birth- rate.	Death- rate.	Epidemic Death- rate.	Phthisis Death- rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	19.5	*11.1	0.63	0.63	64
1913.....	19.7	12.2	0.78	0.78	80
Mean of 10 years 1904-1913 .....	20.8	13.8	0.62	0.91	80

*Increase or Decrease  
in 1914 on—*

<i>Previous Year</i> .....	—0.2	—1.1	—0.15	—0.15	—16
<i>Ten Years' Average</i> .....	—1.3	—2.7	+0.01	—0.28	—16

\* Corrected by "factor" ( $\cdot 9672$ ) = 10.7 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 14 (1 death), scarlet fever 14, enteric fever 2, erysipelas 2, pulmonary tuberculosis 7, other forms of tuberculosis 3, ophthalmia neonatorum 1. Deaths from non-notifiable disease: whooping cough 3. School closure resorted to on account of diphtheria. Specimens submitted for bacteriological examination: diphtheria 73, enteric fever 1, sputum 2.

*Hospital Accommodation.*—For small-pox—12 beds—jointly with Clitheroe (B.). No provision for other infectious diseases.

*Disinfection.*—No apparatus. Houses fumigated 33.

*Water Supply* to larger villages good, but several farms and smaller hamlets dependent upon insufficient and possibly contaminated wells or open streams.



*Sewage.*—Treatment : irrigation at Chatburn and Whalley outfall works ; new works at Barrow completed, and “ with the exception of slight alterations necessary with regard to the diversion of storm water, have proved quite satisfactory.” Hurst Green, Chipping, Pendleton, Downham, and Worston without proper drainage systems.

*Scavenging* moderately well carried out, partly by Council and partly by contractors. Refuse tips provided.

*Sanitary Inspection.*—Houses inspected 85, unfit for habitation 2 ; closing orders made 2. Whalley Church of England school enlarged and considerable sanitary improvements carried out. Dairies and cowsheds “ fair.” To factories and workshops 57 visits paid. Closet accommodation includes 771 privy middens and 238 pails. Privies converted to water closets 26 ; to pails 12. The Inspector served 51 notices ; nuisances remedied 44.

Sanitary requirement.                      Abolition of privy middens in populous places.

**Fylde.**—(Area in acres, 38,768 ; Estimated Population, 12,240).—*Medical Officer of Health*, CHARLES COURT, M.B. ; *Salary*, £60.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	20·4	*10·2	0·32	0·40	80
1913.....	20·3	11·9	1·00	0·33	77
Mean of 10 years					
1904-1913 .....	23·5	12·2	0·98	0·39	90
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+0·1	—1·7	—0·68	+0·07	+3
<i>Ten Years' Average</i> .....	—3·1	—2·0	—0·66	+0·01	—10

\* Corrected by “ factor ” ( $\cdot 9949$ ) = 10·1 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and

membranous croup 13 (2 deaths), scarlet fever 44, enteric fever 3, puerperal fever 3 (1 death), pulmonary tuberculosis 12, other forms of tuberculosis 3. Deaths from non-notifiable diseases: measles 1, whooping cough 1. School closure resorted to on account of scarlet fever. Six specimens submitted for bacteriological examination.

*Hospital Accommodation* provided for all infectious diseases; for small-pox at Elswick, for other diseases at Moss Side. Cases treated: diphtheria 11 (2 deaths), scarlet fever 7, enteric fever 3.

*Disinfection*.—No apparatus. Houses fumigated 52, schools 3, articles of wearing apparel disinfected at hospital 528.

*Water Supply* obtained mainly from the Fylde Water Board. In districts not so supplied, water obtained from wells. In a few instances stored roof-water used. Supply to Treales school obtained from a pump at a neighbouring farm; an unsatisfactory arrangement.

*Sewage*.—The populous parts of Wesham, Freckleton, Wrea Green, Singleton, Carleton, Clifton, and portion of Warton are drained and sewered. In other outlying districts sewage conveyed to cesspools. Wrea Green sewage outfall works unsatisfactory.

*Scavenging*.—In Wesham and Freckleton by contract; in other parts, householders responsible.

*Sanitary Inspection*.—Houses inspected 371; unfit for human habitation 3; closing orders made 3. Slight deficiency of housing accommodation in Wrea Green and Wesham. Privy middens converted to water closets 22; ashbins provided 15. There are 1,856 privy middens in the district. Farm yards drained 4, back yards improved 17.

Factories and workshops inspected 24. The Inspector (Mr. Jolly) served 77 notices ; nuisances remedied 141.

Notable sanitary improvements. Houses in Freckleton redrained ; privies converted to water closets.

Sanitary requirements. Sewer extension from Carleton to Bispham Station ; improvement of Wrea Green sewage outfall plant ; conversion of privy middens where practicable.

**Garstang.**—(Area in acres, 57,380 ; Census Population, 10,691).—*Medical Officer of Health*, THOMAS FISHER, M.R.C.S. ; *Salary*, £70.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·6	*11·6	0·56	0·09	66
1913.....	17·4	11·7	0·46	0·37	32
Mean of 10 years					
1904-1913 .....	21·2	12·1	0·44	0·59	77
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+2·2	—0·1	+0·10	—0·28	+34
<i>Ten Years' Average</i> .....	—1·6	—0·5	+0·12	—0·50	—11

\* Corrected by “ factor ” ( $\cdot 9072$ ) = 10·5 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 2, scarlet fever 20, erysipelas 2, puerperal fever 1, pulmonary tuberculosis 5, other forms of tuberculosis 4. Deaths from non-notifiable diseases : measles 1, whooping cough 1, diarrhoea 4. School closure resorted to on account



of scarlet fever on three occasions, and once for whooping cough. Ten specimens submitted for bacteriological examination.

*Hospital Accommodation.*—For small-pox, joint hospital at Elswick available. Plans of infectious diseases hospital decided upon, but not proceeded with; urgency of this matter emphasised by Dr. Fisher.

*Disinfection.*—No proper apparatus. Houses disinfected 23, schools 4.

*Water Supply* mainly obtained from the Fylde Water Board, but many wells of doubtful purity in use. Report of the Joint Water Committee of the Lancaster and Garstang Rural District Councils on the scheme of the Fylde Water Board for supplying Pilling, Winmarleigh, and the township of Cockerham in the Lancaster Rural Area, presented in December, 1914.

*Sewage.*—Treatment: at Bowgreave and Scorton by septic tanks and bacteria beds. All townships except six are without proper drainage systems. Over 900 yards of 12 and 9-inch sewerage completed during the year.

*Scavenging* by Council in Garstang, Calder Vale, and Scorton; other parts by occupiers. The scavenging of Garstang, undertaken by Council during the year, proved to be more satisfactory, and less costly than when carried out by contractors. Scavenging by Council of other congested areas again urged.

*Sanitary Inspection.*—Houses inspected 174, unfit for habitation and closing orders made 2; one house remedied after closing order, 4 houses demolished. Shortage of housing accommodation in some townships. Cowsheds and dairies received 153 visits. Inspections of canal boats 43. Visits to factories and workshops 191. Three privy middens

and 7 pail closets converted to water closets ; 10 privies replaced by pails. The Inspector (Mr. Cook) served 151 notices ; nuisances remedied 234.

Notable sanitary improvements.      Extension of sewers at Forton and Stonefield.

Sanitary requirements.      Hospital accommodation for infectious diseases ; extension of Fylde Water Board's mains to districts not served ; conversion of privy middens ; more systematic scavenging.

**Lancaster.**—(Area in acres, 54,503 ; Estimated Population, 9,230).—*Medical Officer of Health*, W. EDMONDSON, M.R.C.S. ; *Salary*, £50.

### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	17·5	*12·8	0·32	0·54	67
1913.....	17·1	10·7	0·43	0·65	63
Mean of 10 years					
1904-1913 .....	20·7	12·4	0·70	0·62	83
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·4	+2·1	—0·11	—0·11	+4
<i>Ten Years' Average</i> .....	—3·2	+0·4	—0·38	—0·08	—16

\* Corrected by " factor " ( $\cdot 8944$ ) = 11·4 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria 1, scarlet fever 14, enteric fever 1, erysipelas 4, puerperal fever 1 (fatal), pulmonary tuberculosis 9, other forms of tuberculosis 2. Deaths from non-notifiable diseases : whooping cough 1, diarrhœa 2. Four specimens submitted for bacteriological examination.

*Hospital Accommodation.* — Lancaster Corporation hospitals available for all infectious diseases. Cases treated : scarlet fever 11.

*Disinfection.*—No proper appliances. Houses disinfected 22.

*Water Supply.*—Satisfactory supply provided for Warton, Slyne, Bolton, Bay Horse, Abbeystead, Aldcliffe, Stodday, Hest Bank, and Galgate. Over one-half the houses in the district rely on wells, springs, streams, rain cisterns, &c. Cockerham and Silverdale without public supply. Some of the private supplies are stated to be “bad.” Glasson Dock still relies on water from canal basin.

*Sewage.*—Eight villages drained by seven sewerage systems, all of which discharge into tidal waters ; sewers of one hamlet connected to Lancaster Corporation sewers, another connected to sewers of Carnforth Council, and one scheme provides for land treatment. Sewering of portions of district “leaves much to be desired.” At twenty-three houses new drains constructed.

*Scavenging* satisfactorily performed by contract in villages of Galgate, Glasson, Thurnham, Bolton, Silverdale, Lindeth, Warton, Yealand Conyers, and Yealand Redmayne. This work carried out by occupiers in four villages and by owners in two hamlets ; both unsatisfactory methods.

*Sanitary Inspection.*—Houses inspected 208 ; many defects remedied ; one house rebuilt. Council urged to take steps to meet deficiency of houses at Glasson Dock. Slaughter-houses received 110 visits ; 529 lbs. of beef and 120 lbs. of offal destroyed ; one whole carcase and part of another condemned for tuberculosis. Inspections of cowsheds 94 ; “many lack sufficient air space, lighting, drainage, and water supply.” Inspections of canal boats 47. Factories and workshop visited 44 times ; defects found and remedied 3.



Privy middens converted to water closets 20, to pail closet 1; privies still existing 939. The Inspector (Mr. Littlefair) served 202 notices; nuisances remedied 581.

Sanitary requirements.	Public water supplies for Cockerham, Thurnham, Glasson Dock, and Silverdale; sewerage schemes for several townships; working-class dwellings at Glasson Dock; disinfecting apparatus.
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**Leigh.**—(Area in acres, 11,574; Estimated Population, 10,330).—*Medical Officer of Health*, C. CHALLINOR, L.R.C.P. (Lond.), D.P.H.; *Salary*, £100.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	26·9	*12·4	0·96	0·77	115
1913.....	26·6	17·0	3·12	1·36	153
Mean of 10 years					
1904-1913 .....	29·8	15·6	2·33	0·86	140
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·3	—4·6	—2·16	—0·59	—38
<i>Ten Years' Average</i> .....	—2·9	—3·2	—1·37	—0·09	—25

\* Corrected by "factor" (1·0463)=12·9 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 8 (1 death), scarlet fever 28, enteric fever 6 (2 deaths), erysipelas 15, puerperal fever 2, pulmonary tuberculosis 13, other forms of tuberculosis 7, ophthalmia neonatorum 3. Deaths from non-notifiable diseases: whooping cough 3, diarrhoea 4. Specimens submitted for bacteriological examination: enteric fever 2.

*Hospital Accommodation* for all diseases available at Leigh, &c., Joint Board's hospital at Astley. Cases treated : diphtheria 1, scarlet fever 13, enteric fever 3 (2 deaths).

*Disinfection*.—Steam apparatus at joint hospital. Houses disinfected 37.

*Water Supply*.—Astley obtains water from Manchester Corporation by agreement with Tyldesley, supplemented, if necessary, by supply from Leigh ; Culcheth and Kenyon supplied by Warrington and Houghton Green ; Lowton by arrangement with Abram and Newton. Service constant and satisfactory. Other parts of district rely on wells.

*Sewage* treated at five outfall works, viz. : Astley, precipitation tanks and continuous filtration ; Glazebury and Pocket Nook, septic tanks and continuous filtration ; Lowton Common, detritus tanks, continuous filtration, and land ; Lowton St. Mary's, sedimentation tanks and continuous filtration.

*Scavenging*.—Unsatisfactory system, viz. : arrangement between tenants and farmers.

*Sanitary Inspection*.—Houses inspected 184, unfit for habitation 8, defects remedied at 161, two houses closed and 3 demolished without orders being made. To meet the deficiency of houses in Astley, a colliery company contemplate building 288 houses ; one-third nearing completion. Dairies and cowsheds received 266 visits ; improvements effected at several cowsheds. Inspections of factories and workshops 44, defects found and remedied 6. Privy middens number 1,760 ; no conversions. The Inspector (Mr. Monks) served 267 notices ; nuisances remedied 278.

Notable sanitary improvements.	Ventilation of living rooms ; attention to drainage.
Sanitary requirements.	Conversion of privy middens ; better system of scavenging.

**Limehurst.**—(Area in acres, 4,689 ; Estimated Population, 9,370).—*Medical Officer of Health*, GEORGE F. BOWMAN, M.B. ; *Salary*, £40.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	26·5	*15·9	2·56	1·17	136
1913.....	24·9	14·2	0·84	0·75	105
Mean of 10 years					
1904-1913 .....	24·6	14·0	1·28	0·98	119
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+1·6	+1·7	+1·72	+0·42	+31
<i>Ten Years' Average</i> .....	+1·9	+1·9	+1·28	+0·19	+17

\* Corrected by "factor" (1·0462)=16·6 per 1,000.

On the 30th March, 1914, the Local Government Board confirmed an order of the County Council extending the boundaries of the Urban District of Lees so as to include the township of Crossbank. An area of 86 acres, with a population of 1,360 was thereby transferred from this district to the Urban District of Lees.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 5 (1 death), scarlet fever 135 (6 deaths), enteric fever 5 (1 death), erysipelas 5, puerperal fever 1 (fatal), pulmonary tuberculosis 15, other forms of tuberculosis 4, ophthalmia neonatorum 3. Deaths from non-notifiable diseases : measles 8, whooping cough 4, diarrhoea 4. During the greater part of the year, scarlet fever, measles, and respiratory diseases specially prevalent. School closure necessitated.

*Hospital Accommodation.*—For small-pox, Ashton-under Lyne, &c., joint hospital available ; no accommodation for



other infectious diseases, but 10 cases of scarlet fever (7 from barracks) and 3 enteric fever cases removed, by arrangement, to Oldham Corporation hospital; 2 of the former and one of the latter terminated fatally. Three scarlet fever cases removed to Ashton-under-Lyne Borough hospital.

*Disinfection.*—Steam apparatus belonging to Ashton-under-Lyne Corporation available. Houses fumigated 104.

*Water Supply* mainly obtained from the Ashton-under-Lyne, Stalybridge, and Dukinfield Joint Water Board. Oldham supplies part of parish of Alt. Upland portions of Alt and Hartshead rely upon springs and wells.

*Sewage.*—Treatment at Bardsley, Crossbank, Newmarket, and Waterloo by precipitation tanks, storm tanks, continuous filtration, and humus tanks. At Woodhouses and Little Moss certain areas drained into Ashton-under-Lyne sewers. Other parishes, cesspools only.

*Scavenging* said to be satisfactory; in four parishes performed by Authority, and in two by owners of property.

*Sanitary Inspection.*—Houses inspected 89, defects remedied without closing orders 25. The Medical Officer of Health again presses forward the urgency of bringing old farmsteads more up to date. Slaughterhouses clean, one diseased carcase seized and destroyed. Case of anthrax at a cowshed effectively dealt with. Factory and workshop inspections 58, defects found 2. Privy middens converted to water closets 24, to pails 2. The Inspector (Mr. Turner) served 88 notices; nuisances remedied 161; legal proceedings in one case.

Sanitary requirements.

Conversion of privies to water-carriage system; flagging and paving of side streets; modern farm buildings.

**Lunesdale.**—(Area in acres, 76,267 ; Census Population, 6,882).—*Medical Officer of Health*, B. J. ACHESON, L.R.C.S.I. ; *Salary*, £20 (no claim).

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	18·4	*12·2	0·43	0·72	47
1913.....	15·5	13·0	0·58	0·29	74
Mean of 10 years					
1904-1913 .....	19·7	11·9	0·55	0·60	77
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+2·9	—0·8	—0·15	+0·43	—27
<i>Ten Years' Average</i> .....	—1·3	+0·3	—0·12	+0·12	—30

\* Corrected by " factor " ( $\cdot 9317$ ) = 11·3 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 4 (1 death), scarlet fever 6, enteric fever 2 (1 death), erysipelas 2, pulmonary tuberculosis 4, other forms of tuberculosis 1, ophthalmia neonatorum 1. Death from non-notifiable disease : diarrhoea 1. School closure on account of diphtheria.

*Hospital Accommodation.*—Thirteen beds available at the Council's hospital at Farleton. Cases treated : diphtheria 3, scarlet fever 4.

*Disinfection.*—Lancaster Corporation steam apparatus available. Houses fumigated 16.

*Water Supply.*—Ample supply from various sources to greater part of district. Unsatisfactory supply in parts of Roeburndale in dry weather ; shortage during the summer at Melling.

*Sewage.*—Outfall works in operation at Caton, Halton, Hornby, and Wray ; elsewhere cesspools provided. Sewerage scheme for Over Kellet under serious consideration, and Arkholme receiving attention. Main sewer at Brookhouse improved.

*Scavenging* in four parishes by contract, the remainder left to occupiers. The Medical Officer of Health recommends adoption of proper system of scavenging for Hornby.

*Sanitary Inspection*.—Houses inspected 28; unfit for habitation 1; one closing order made; defects remedied at 20 houses. Many cowsheds improved, but much attention yet needed with regard to light, ventilation, and cleanliness. Four samples of milk submitted for bacteriological examination. Visits to factories and workshops 33, six defects found. Privy middens number 1,255; only 3 conversions to water closets during year. The Inspector (Mr. Ellis) served 35 notices; nuisances abated 81.

Sanitary requirements. Sewerage and sewage disposal schemes in certain parishes; improvements in scavenging; attention to water supplies where shortage occurs.

**Preston**.—(Area in acres, 52,929; Census Population, excluding Institutions, 18,760).—*Medical Officer of Health*, CHARLES J. TRIMBLE, L.R.C.P.E., D.P.H.; Salary, £130.

#### *Vital Statistics.*

##### PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	21·1	*12·6	0·63	0·95	78
1913.....	20·3	12·6	0·85	0·79	110
Mean of 10 years					
1904-1913 .....	24·3	13·8	0·70	0·74	96
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+0·8	nil.	—0·22	+0·16	—32
<i>Ten Years' Average</i> .....	—3·2	—1·2	—0·07	+0·21	—18

\* Corrected by "factor" ( $\cdot 9813$ ) = 12·3 per 1,000.

Highest township death-rates attained in Cuerdale,



Goosnargh, Barton, Houghton, and Whittingham ; and lowest in Farington, Lea, Grimsargh, Elston, and Howick.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 13 (1 death), scarlet fever 137 (2 deaths), enteric fever 3, erysipelas 8, pulmonary tuberculosis 16, other forms of tuberculosis 2, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : measles 1, whooping cough 1, diarrhoea 7. Scarlet fever fairly prevalent throughout the year, and in this connection Dr. Trimble calls attention to the spread of the disease by unrecognised cases, or by gross carelessness on the part of parents of children suffering from mild forms thereof. Two striking cases quoted to illustrate the dangerous practices which are carried on. The Medical Officer states “ I am very strongly of opinion that the time has arrived when the Rural Council should cease to be satisfied with a verbal caution, and am convinced that prosecution of the next offender would have a much more salutary effect.” School closure adopted on account of scarlet fever and measles.

*Hospital Accommodation.*—For small-pox, joint hospital at Elswick available ; other infectious diseases isolated at the Preston (R.), &c., joint hospital at Fulwood. Cases treated : diphtheria 11 (1 death), scarlet fever 125 (1 death), enteric fever 3.

*Disinfection.*—Steam apparatus at Fulwood hospital available. Houses fumigated 161.

*Water Supply* mainly derived from reservoirs of Preston Corporation and Fulwood Urban Council. Arrangements made with the Fylde Water Board for supply of water in bulk to the townships of Woodplumpton, Lea, and Cottam upon the completion of new water mains.

*Sewage.*—Treatment : Farington, open septic tanks, filtration, land treatment ; Grimsargh, closed septic tanks, bacteria

filters ; Ribchester, continuous precipitation, filtration, and land irrigation. Penwortham sewage works improved by the addition of new receiving chambers, detritus chambers, storm-water tanks, and revolving sprinklers. It is proposed to relay the low-level sewer at Middleforth and to raise the sewage by ejectors whence it will flow by gravitation to the works. Amended plans and estimates dealing with the sewerage and sewage disposal works of the townships of Longton and Little Hoole forwarded to Local Government Board.

*Scavenging.*—Duties undertaken in Penwortham, Longton, Little Hoole, Ribchester, and Farington by Parochial Committees. At Penwortham the Committee have taken the matter into their own hands, and provided horses and men ; in other townships contracts let to farmers.

*Sanitary Inspection.*—Houses inspected under Section 17 of the Housing Act 193 ; houses made habitable without closing orders 77. Dr. Trimble draws attention to the necessity of having a bath constructed in each cottage where water is available, and to the use of the ordinary kitchen fire as a destructor of house refuse. No privy middens converted to water closets during the year, although 1,804 middens are still in existence ; 21 privies converted to pail closets. Number of visits to cowsheds 220, factories and workshops 91. Canal boats examined 15. The Inspector (Mr. Ashcroft) served 250 notices ; nuisances remedied 250.

Notable sanitary improvement.

Additions at Penwortham sewage works.

Sanitary requirements.

Abolition of privy middens where possible ; paving of back yards ; sewerage of certain townships.

**Sefton.**—(Area in acres, 14,867 ; Census Population, 5,953).  
 —*Medical Officer of Health*, J. C. BRADSHAW, L.R.C.P.E..  
 D.P.H. ; *Salary*, £105.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19.1	*10.7	0.16	0.83	70
1913.....	21.6	11.7	0.33	1.51	54
Mean of 10 years					
1904-1913 .....	21.5	13.3	0.84	0.90	86
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	—2.5	—1.0	—0.17	—0.68	+16
<i>Ten Years' Average</i> .....	—2.4	—2.6	—0.68	—0.07	—16

\* Corrected by "factor" (1.0126)=10.8 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 4, scarlet fever 9, enteric fever 1, erysipelas 6, pulmonary tuberculosis 7, other forms of tuberculosis 2. Death from non-notifiable disease : measles 1.

*Hospital Accommodation* provided for all diseases at the Liverpool Corporation hospitals. Cases treated : diphtheria 4, scarlet fever 6.

*Disinfection* of clothing, bedding, &c., carried out by Liverpool Corporation.

*Water Supply* mainly obtained from Liverpool Corporation ; a few outlying places rely on wells, &c.

*Sewage* from portion of district discharged into the Liverpool sewers ; other parts dealt with by septic tank or land treatment. River Alt "still remains in a state of pollution."

*Scavenging* said to be satisfactorily performed ; West Derby by contract ; remainder of district by occupiers.



*Sanitary Inspection.*—Houses inspected 157, unfit for habitation and closing orders made 2, defects remedied at 17, houses demolished 7. Deficiency of housing accommodation gradually decreasing. Visits to cowsheds 40. Inspections of factories 2. No conversions of privy middens; about 800 exist. The Inspector (Mr. Poole) served 166 notices; nuisances remedied 166.

Sanitary requirements. Abolition of privy middens where practicable; scavenging by Authority; improvement of housing conditions,

**Ulverston.**— (Area in acres, 127,549; Estimated Population, 17,020).—*Medical Officer of Health*, G. H. PATTERSON, M.R.C.S., D.P.H.; *Salary*, £230.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·5	*12·6	0·58	0·64	48
1913.....	19·4	12·7	0·58	0·94	75
Mean of 10 years					
1904-1913 .....	20·0	12·9	0·51	0·86	76

*Increase or Decrease in 1914 on—*

<i>Previous Year</i> .....	+0·1	—0·1	nil.	—0·30	—27
<i>Ten Years' Average</i> .....	—0·5	—0·3	+0·07	—0·22	—28

\* Corrected by "factor" ( $\cdot 8719$ ) = 10·9 per 1,000.

On the 1st April 1914, by an order of the County Council the boundaries of this district altered, portions of the Townships of Broughton East and Allithwaite Lower, comprising an area of 322 acres and a population of 26, being transferred from this district to the Grange-over-Sands Urban District.

*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 13 (2 deaths), scarlet fever 13, enteric

fever 6 (1 death), erysipelas 7 (1 death), pulmonary tuberculosis 17, other forms of tuberculosis 4, ophthalmia neonatorum 1. Deaths from non-notifiable diseases : measles 2, whooping cough 3, diarrhoea 2. Several schools closed owing to prevalence of measles, whooping cough, chicken-pox, and diphtheria. Specimens submitted for bacteriological examination : diphtheria 5, enteric fever 2, tuberculosis 1.

*Hospital Accommodation.*—Arrangement with the Barrow Corporation for isolation of small-pox ; for ordinary infectious diseases, hospital at High Carley provided jointly with the Urban Districts of Dalton-in-Furness and Ulverston. Cases treated : diphtheria 3, scarlet fever 8, enteric fever 3 (1 death).

*Disinfection.*—No apparatus in district, but hospital appliances sometimes used. Houses disinfected 31, schools 3.

*Water Supply.*—Cartmel Division : Cartmel, extension of facilities in various parts of district ; High Newton, several houses connected to Grange water mains, but general scheme for the village necessary. Consideration of scheme to supply Low Browedge deferred. Hawkshead Division : Claife, Far and Near Sawrey water supply scheme now in operation. Scheme for Backbarrow in Colton, delayed owing to proposed extension to include Haverthwaite. High Furness Division : extension of water main to Marshside, Chapples, and Wallend in progress. Low Furness Division : water main extended in Aldingham. Provision of a satisfactory water supply for village of Leece and hamlet of Dendron stated to be an urgent necessity. Five wells closed.

*Sewage.*—High Furness Division : scheme for sewerage village of Soutergate approved by Local Government Board, but in abeyance. Low Furness Division : lowering of the outlet of Urswick Tarn has facilitated the working of the sewage tanks, but provision of a sewerage scheme for Little

Urswick “is a real necessity.” Cartmel Division : sewerage schemes required for Allithwaite, Lindale, and Cartmel Town.

*Scavenging* performed partly by Council and partly by contractors ; arrangements for removal of house refuse further extended during the year.

*Sanitary Inspection*.—Houses inspected 579, defects remedied at 127, dwellings unfit for habitation and closing orders made 8. Cowsheds received 447 visits, slaughter-houses 114. Inspections of factories and workshops 255. Twelve privy middens converted to water closets ; 2,273 remain. Notices served 126 ; nuisances remedied 99.

Notable sanitary improvement. Provision of water supply to Sawrey.

Sanitary requirements. Satisfactory water supply for Leece (Low Furness) and Backbarrow (Colton) urgently needed ; sewerage schemes for Lindale, Cartmel, and Allithwaite.

**Warrington**.—(Area in acres, 19,355 ; Estimated Population, excluding County Asylum, 12,319).—*Medical Officer of Health*, R. SEPHTON, L.R.C.P.E. ; *Salary*, £170.

#### *Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	23·0	*10·1	0·94	0·86	78
1913.....	22·9	12·6	1·91	1·08	90
Mean of 10 years					
1904-1913 .....	23·3	12·2	1·46	0·79	109
<i>Increase or Decrease in 1914 on—</i>					
<i>Previous Year</i> .....	+0·1	—2·5	—0·97	—0·22	—12
<i>Ten Years' Average</i> .....	—0·3	—2·1	—0·52	+0·07	—31

\* Corrected by “factor” (1·0409)=10·5 per 1,000.

Sub-division death-rates : Sankey 9·9, Winwick 7·1, Rixton nil.



*Infectious Diseases.*—Cases notified: diphtheria and membranous croup 8 (2 deaths), scarlet fever 95, enteric fever 8 (1 death), erysipelas 8, pulmonary tuberculosis 22, ophthalmia neonatorum 1. Deaths from non-notifiable diseases: measles 1, diarrhoea 8. School closure resorted to on account of measles, mumps, and chicken-pox.

*Hospital Accommodation.*—No provision for small-pox; for other infectious diseases Warrington Corporation hospital available. Cases treated: diphtheria 1, scarlet fever 3.

*Disinfection.* — Steam apparatus at hospital used. Houses fumigated 67.

*Water Supply.*—Mostly from Warrington Corporation.

*Sewage.*—Treatment: precipitation tanks at Burtonwood; other portions of district, cesspools and ditches.

*Scavenging* by contract at Penketh and Sankey; by occupiers of houses in other parts of district. Work said to be carried out “satisfactorily.”

*Sanitary Inspection.*—Houses inspected 272; defects remedied at 156. Cowsheds kept fairly clean; one “reconstructed and brought up to date.” To factories and workshops 92 visits of inspection, defects remedied 2. Canal boats examined 21; one infringement noted. Closet accommodation includes 667 privy middens and 1,719 pail closets; of the former type only 8 converted to water closets and 36 to pails. The Inspector (Mr. Kerfoot) served 115 notices; nuisances remedied 243.

Sanitary requirements.

Adequate water supply for Rixton; privy conversion where practicable.

**West Lancashire.** — (Area in acres, 61,555 ; Estimated Population, 20,951).—*Medical Officer of Health*, G. E. SCHOLEFIELD, M.D., D.P.H. ; *Salary*, £500.

*Vital Statistics.*

	PER 1,000 OF POPULATION.				Rate of Deaths under 1 year to 1,000 Births.
	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	
1914.....	19·4	*13·0	0·85	0·57	127
1913.....	19·7	12·6	0·86	0·91	94
Mean of 10 years					
1904-1913 .....	21·8	12·4	0·80	0·75	93
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—0·3	+0·4	—0·01	—0·34	+33
<i>Ten Years' Average</i> .....	—2·4	+0·6	+0·05	—0·18	+34

\* Corrected by “ factor ” ( $\cdot 9812$ ) = 12·7 per 1,000.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 88 (7 deaths), scarlet fever 74 (1 death), enteric fever 6 (1 death), erysipelas 12 (1 death), puerperal fever 2, poliomyelitis 2, pulmonary tuberculosis 18, other forms of tuberculosis 11. Deaths from non-notifiable diseases : measles 1, whooping cough 5, diarrhoea 3. Measles, whooping cough, and diphtheria prevalent during the spring and autumn, and necessitated school closure ; 149 cases of measles and 237 cases of whooping cough reported voluntarily. Bacteriological examinations : blood 1, swabs 504, sputum 1, milk 2, water 1. The Medical Officer states “ that in connection with the epidemic of diphtheria, the value of the injection of antitoxin was clearly proved, and justifies the supply of this remedial serum at the public expense.”

*Hospital Accommodation.*—For small-pox, tent hospital can quickly be erected, or patients sent to Liverpool. For other infectious diseases a country residence at Aughton

converted into an isolation hospital. Cases treated : diphtheria 71 (4 deaths), scarlet fever 62 (1 death), enteric fever 4 (1 death).

*Disinfection.*—Steam apparatus (Thresh) at Aughton hospital. Houses fumigated 184.

*Water Supply.*—Southport, Birkdale, and West Lancashire Water Board supply nine townships. Two other townships receive their supply partially from Ormskirk Urban District Council, two from Preston Rural District Council, two from St. Helens Corporation, and one from Lathom and Burscough Council. Mains extended in Aughton and Halsall by Southport Water Board. Over 88 per cent. of inhabited houses provided with public water supply. Thirteen samples of well water analysed, one satisfactory, nine more or less unsatisfactory, three polluted.

*Sewage.*—Treatment : at Aughton, precipitation and land filtration for the sewage from southern watershed ; Ormskirk receives sewage from northern watershed of Aughton and small portion of Bickerstaffe. Cesspools only for a great part of the district.

*Scavenging* carried out satisfactorily by contract in Aughton and North Meols. Occupiers elsewhere usually arrange with neighbouring farmers for removal of refuse.

*Sanitary Inspection.*—Houses inspected 611, unfit for habitation 3, defects remedied without closing orders at 126 dwellings. Slaughter-houses found satisfactory ; carcasses of 5 cows and 1 pig condemned. Inspections of factories and workshops 288, defects found 20, remedied 19. Canal boats inspected 64, infringements 11. Privy middens converted to water closets 26, to pails 40 ; 3,390 remain, but many are of a modified type. The Inspectors (Messrs. Hunter and Ainsworth) served 160 notices ; nuisances abated 324.



Notable sanitary improvement.      Extension of sewer commenced in Aughton.

Sanitary requirements.      Provision of proper systems of sewerage and sewage disposal in certain areas or townships ; abolition of privy middens where possible.

**Whiston.**—(Area in acres, 31,179 ; Estimated Population, excluding Public Institutions, 19,724).—*Medical Officer of Health*, THOS. U. MERCER, M.B., D.P.H. ; *Salary*, £175.

### *Vital Statistics.*

#### PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	23·0	*13·5	1·01	1·01	105
1913.....	24·4	14·6	2·11	0·46	112
Mean of 10 years					
1904-1913 .....	24·3	11·8	1·35	0·73	98
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	—1·4	—1·1	—1·10	+0·55	—7
<i>Ten Years' Average</i> .....	—1·3	+1·7	—0·34	+0·28	+7

\* Corrected by " factor " (1·0010)=13·5 per 1,000.

On the 17th August, 1914, the Local Government Board confirmed an order of the County Council transferring an area of 112 acres from the Township of Whiston to the Urban District of Prescott.

*Infectious Diseases.*—Cases notified : diphtheria and membranous croup 52 (8 deaths), scarlet fever 80 (2 deaths), enteric fever 4, erysipelas 9, pulmonary tuberculosis 16, other forms of tuberculosis 5, ophthalmia neonatorum 5. Deaths from non-notifiable diseases : measles 3, diarrhoea 7. School closure resorted to on account of whooping cough and measles.

*Hospital Accommodation.*—For small-pox, 20 beds provided ; other infectious diseases, 34 beds. Cases treated : diphtheria 41 (4 deaths), scarlet fever 60 (2 deaths), enteric fever 4.

*Disinfection.*—Washington Lyon's steam apparatus at sanatorium. Houses disinfected 106.

*Water Supply.*—Whiston, from a private company ; other townships mainly supplied from mains of Liverpool, Warrington, St. Helens, and Widnes Corporations. Several isolated farms and cottages without proper supply.

*Sewage.*—Outfall works at Rainhill, Whiston, and Eccleston in operation ; sewage of Hale, Ditton, and portion of Halewood discharges into River Mersey tidal waters ; cesspools receive drainage from other townships. Sewage scheme prepared for Knowsley, comprising septic tanks and filter beds. Cronton, Tarbock, Speke, &c., without proper drainage systems.

*Scavenging* by contract at Whiston, Rainhill, Eccleston, and part of Windle ; Council hope to shortly take over this work. In other parts of district work of scavenging devolves upon householders.

*Sanitary Inspection.*—Houses inspected 323 ; unfit for habitation and closing orders made 7. Shortage of houses not so pronounced as last year. Condition of schools generally satisfactory ; at Whiston school water closets provided in lieu of pails. Continued improvement in condition of cowsheds. To factories and workshops 132 visits paid ; defects found and remedied 13. Closet accommodation includes 2,058 privy middens ; no conversions to water-carriage system during year. Detailed report on condition of 608 privies situate in areas where convenient sewers exist submitted to Authority by Dr. Mercer, who is of opinion that very little will be accomplished in the matter of conversions until the

Council are prepared to contribute towards the cost thereof. The Inspector (Mr. Fraser) served 90 notices; nuisances remedied 264.

Sanitary requirements.                      Conversion of privies to water-carriage system; improvement of drainage systems and scavenging.

**Wigan.**—(Area in acres, 11,695; Estimated Population, 6,422).—*Medical Officer of Health*, J. H. WILSON, M.D.; Salary, £80.

*Vital Statistics.*

PER 1,000 OF POPULATION.

	Birth-rate.	Death-rate.	Epidemic Death-rate.	Phthisis Death-rate.	Rate of Deaths under 1 year to 1,000 Births.
1914.....	23·2	*13·3	0·62	0·46	134
1913.....	20·8	13·2	0·78	0·15	127
Mean of 10 years					
1904-1913 .....	25·6	13·7	0·97	0·52	106
<i>Increase or Decrease</i>					
<i>in 1914 on—</i>					
<i>Previous Year</i> .....	+2·4	+0·1	—0·16	+0·31	+7
<i>Ten Years' Average</i> .....	—2·4	—0·4	—0·35	—0·06	+28

\* Corrected by "factor" (1·0001)=13·3 per 1,000.

*Infectious Diseases.*—Cases notified: diphtheria 2, scarlet fever 11, enteric fever 4 (2 deaths), erysipelas 11, puerperal fever 1, pulmonary tuberculosis 6, other forms of tuberculosis 3, ophthalmia neonatorum 2. Deaths from non-notifiable diseases: measles 1, diarrhœa 1.

*Hospital Accommodation.*—No provision for ordinary infectious diseases; for small-pox, cottage with four beds.

*Disinfection.*—No apparatus; houses disinfected with formaldehyde gas.



*Water Supply* from “various sources.” Mossy Lea portion of Wrightington provided with a further supply from newly laid mains.

*Sewage.*—Septic tanks and triple contact beds for portion of township of Haigh. Areas or townships without proper drainage system: Dalton, Parbold, Shevington, Wrightington, Worthington, and portions of Haigh.

*Scavenging* by contract, not entirely satisfactory.

*Sanitary Inspection.*—Houses inspected 75, defects such as drainage, dampness, and general dilapidation, remedied at 37. Medical Officer of Health states “there is undoubtedly a shortage of houses, which makes it difficult to administer the Housing Acts.” Condition of certain schools “bad.” Cowsheds do not altogether conform to modern ideas of lighting and ventilation. To factories and workshops 36 visits made, 5 defects remedied. Canal boats examined 40, infringements 7. Privy middens converted to water closets 3, to pails 5; 915 still exist. The Inspector (Mr. Elliott) served 77 notices; nuisances abated 63.

Notable sanitary improvements.

Attention to general insanitary conditions.

Sanitary requirements.

Sewerage schemes; conversion of privy middens; better scavenging; hospital accommodation; improvement of cowsheds; an Assistant Sanitary Inspector.

# VITAL STATISTICS.

**TABLE I.—DEATHS** registered during the year 1914 in the **URBAN DISTRICTS** of the Administrative County of Lancaster, classified according to Ages and Localities, and showing also the Area and Population of such Localities, and the Birth-rate and Death-rates during the year.

NOTES:—The Area and "Census" Population of each District are taken from the Census Return.

The Births and Deaths in each District are corrected by the inward and outward transfers supplied by the Registrar-General.

\*Death-rate corrected for difference in age and sex constitution by "factor" supplied by Registrar-General.

URBAN DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis- tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
		Census, 1911.	Estimate to middle of 1914.		Birth- rate.	Death-rate.		Death- rate from the seven principal Epidemic Diseases.		Phthisis Death- rate.									
						Crude Rate.	*Stand- ardized Rate.												
ABRAM .....	1984	6893	7198	214	29.7	15.0	17.1	1.66	1.25	112	108	24	9	8	5	10	14	21	17
ACCRINGTON (Borough) .....	3427	45029	45775	884	19.3	13.9	15.0	1.44	0.87	117	640	104	32	32	21	23	83	168	177
ADLINGTON.....	1062	4457	4600	102	22.1	10.6	11.3	0.21	0.65	39	49	4	..	..	4	6	8	12	15
ASHTON IN-MAKER- FIELD.....	6251	21543	22687	692	30.5	13.1	14.3	1.19	0.44	109	299	76	16	16	12	17	34	59	69
ASHTON-UNDER- LYNE (Borough) ..	1345	45172	45179	1053	23.3	18.5	19.9	3.40	1.21	186	836	196	52	45	34	37	93	200	179
ASPULL .....	1906	8276	8276	233	28.1	14.4	15.4	1.57	0.48	81	120	19	6	6	5	4	20	38	22
ATHERTON .....	2265	18982	20500	556	27.1	13.0	14.5	1.95	1.31	109	268	61	26	12	16	17	41	50	45
AUDENSHAW.....	1241	7977	8274	186	22.4	13.6	14.6	1.57	0.48	134	113	25	9	3	4	5	11	29	27
BACUP (Borough) ....	6120	22318	22500	421	18.7	17.9	18.7	1.24	1.20	125	403	53	19	20	18	21	56	118	98
BARROWFORD .....	1385	5527	5800	114	19.6	15.1	16.1	2.75	0.34	157	88	18	4	8	3	1	10	17	27



TABLE I.—Continued.

URBAN DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis- tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
		Census, 1911.	Estimate to middle of 1914.		Birth- rate.	Death-rate.		Death- rate from the seven principal Epidemic Diseases.		Phthisis Death- rate.	Under 1 year.	1 and under 2.	2 and under 3.	3 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.
						Crude Rate.	*Stand- ardized Rate.												
BILLINGE .....	4596	4903	5060	141	27·8	18·5	18·1	1·58	0·79	127	94	18	2	6	3	1	10	29	25
BISPHAM-WITH- NORBRECK .....	1346	2244	2850	25	8·7	13·3	12·3	Nil.	0·35	40	38	1	..	..	..	1	11	13	12
BLACKROD .....	2392	3896	4014	90	22·4	12·2	13·2	0·49	0·49	111	49	10	4	1	1	3	6	16	8
BRIERFIELD .....	807	8259	9100	182	20·0	12·8	14·4	1·31	0·65	93	117	17	6	6	9	5	11	30	33
CARNFORTH .....	1505	3141	3140	72	22·9	14·3	14·7	0·31	0·63	69	45	5	2	2	..	3	7	10	16
CHADDERTON .....	3082	28299	29512	712	24·1	15·1	16·4	1·79	1·05	101	448	72	31	22	24	24	63	110	102
CHORLEY (Borough) ..	3614	30315	31500	756	24·0	15·3	16·7	2·38	0·73	149	482	113	34	33	20	13	57	104	108
CHURCH.....	529	6888	7050	136	19·2	15·6	17·0	1·41	0·85	147	110	20	5	4	4	2	11	41	23
CLAYTON-LE-MOORS ..	1059	8868	9200	212	23·0	14·6	16·1	1·73	0·97	117	135	25	10	6	6	7	23	33	25
CLITHEROE (Borough)	2385	12500	12850	261	20·3	11·8	11·8	0·62	0·54	107	152	28	4	3	1	2	21	40	53
COLNE (Borough) ....	5063	25689	27404	489	17·8	13·7	15·0	1·31	0·91	116	376	57	19	14	13	22	57	91	103
CROMPTON .....	2865	14750	15300	297	19·4	15·0	16·6	1·37	1·04	127	231	38	9	9	10	15	33	52	65
CROSTON .....	2347	2041	2055	43	20·9	10·2	9·7	0·97	Nil.	46	21	2	..	..	3	..	2	3	11
DALTON-IN-FURNESS..	7990	10763	13500	322	23·8	13·5	12·1	1·62	1·11	111	183	36	12	8	2	8	23	44	50
DARWEN (Borough) ..	5959	40332	41038	765	18·6	14·4	16·1	0·87	0·70	118	595	91	15	16	23	24	84	166	176
DENTON .....	2594	16877	17344	366	21·1	12·9	13·7	1·26	0·98	120	225	44	8	10	11	8	29	53	62

TABLE I.—Continued.

URBAN DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.					Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.								
		Census, 1911.	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.	Phthisis Death-rate.		Under 1 year.	1 and 2 under 2.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.		
						Crude Rate.	*Stand-ardized Rate.												
DROYLSDEN . . . . .	1009	13259	13900	331	23·8	14·3	15·9	1·94	1·07	120	199	40	11	10	12	7	26	52	41
ECCLES (Borough) . . . .	2057	41944	43300	938	21·6	13·0	13·9	0·99	1·08	105	567	99	29	20	24	23	73	134	165
FAILSWORTH . . . . .	1072	15998	16600	452	27·2	15·1	16·6	2·28	1·14	121	252	55	19	16	13	9	32	61	47
FARNWORTH . . . . .	1504	28131	29000	670	23·1	14·3	15·6	2·03	0·79	122	416	82	30	24	17	23	47	98	95
FLEETWOOD . . . . .	2510	15875	18075	485	26·8	12·1	12·9	0·71	1·05	98	220	48	9	10	5	13	35	47	53
FORMBY . . . . .	5613	5947	5950	112	18·8	10·9	11·0	0·67	0·50	26	65	3	2	3	3	2	9	19	24
FULWOOD . . . . .	2116	†5871	†6336	85	13·4	11·9	13·0	0·47	0·31	58	76	5	..	3	1	7	8	12	40
GOLBORNE . . . . .	1679	6931	7250	220	30·3	11·1	11·7	1·37	0·27	104	81	23	2	6	2	5	11	10	22
†GRANGE-OVER-SANDS.	1862	2232	2250	20	8·8	7·5	6·9	Nil.	0·44	50	17	1	..	..	..	3	5	2	6
GREAT CROSBY . . . . .	1867	12273	13568	272	20·0	9·7	10·4	0·36	0·51	70	132	20	1	4	3	6	21	40	37
GREAT HARWOOD . . .	2868	13815	14000	311	22·2	11·1	12·7	1·14	0·50	96	156	30	13	5	4	7	22	41	34
HASLINGDEN (Borough) . . . . .	8196	18719	19000	332	17·4	15·2	16·6	0·68	0·63	111	289	37	11	10	7	13	25	95	91
HAYDOCK . . . . .	2411	9649	10025	309	30·8	12·8	13·8	1·89	0·69	119	129	37	6	6	3	6	17	27	27

† Excluding the number of inmates in the Union Workhouse.

† By Order of County Council, operative from 1st April, 1914, district extended by 322 acres and population of 26, transferred from Ulverston (R.).

TABLE I.—Continued.

URBAN DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
		Census, 1911.	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.		Phthisis Death-rate.	Under 1 year.	1 and 2 under 2.	2 and 5 under 5.	5 and 15 under 15.	15 and 25 under 25.	25 and 45 under 45.	45 and under 65.	65 and upwards.	
						Crude Rate.	*Stand-ardized Rate.												
HEYSHAM .....	1835	3350	3350	43	12·8	15·2	13·4	0·29	Nil	46	51	2	..	..	1	1	5	16	26
HEYWOOD (Borough) .	3658	26697	27100	553	20·4	17·8	19·0	0·70	1·36	137	485	76	20	14	17	15	74	126	143
HINDLEY .....	2612	24100	24600	744	30·2	15·1	16·8	1·62	0·56	125	372	93	22	10	16	15	55	73	88
HORWICH .....	3257	16285	16764	357	21·2	11·5	13·1	0·89	0·89	75	193	27	9	7	15	9	25	51	50
HURST .....	638	7858	8112	223	27·4	16·8	17·8	1·60	1·47	116	137	26	8	6	5	5	21	29	37
HUYTON-WITH-ROBY .	3053	4559	4559	74	16·2	12·9	13·6	1·09	0·87	94	59	7	1	3	4	2	6	12	24
INCE-IN-MAKERFIELD .	2320	22034	22340	834	37·3	19·8	21·8	4·11	0·71	145	444	121	56	44	24	14	41	75	69
IRLAM .....	4629	6308	8000	234	29·2	12·0	13·0	0·62	0·50	102	96	24	6	5	2	2	17	18	22
KEARSLEY .....	1004	9669	9850	221	22·4	13·2	14·4	1·21	0·71	135	131	30	4	5	8	3	15	40	26
KIRKHAM .....	857	3793	3950	91	23·0	14·9	15·0	1·01	2·02	76	59	7	3	4	2	1	10	11	21
LANCASTER (Borough).	3506	†38513	†38593	788	20·4	12·6	13·1	0·46	1·39	86	488	68	16	14	28	31	87	117	127
†LATHOM AND BUR-SCOUGH .....	13641	7235	7381	155	20·9	12·7	12·4	0·67	0·81	70	94	11	4	2	5	4	11	17	40
§LEES .....	288	3650	5032	119	23·6	18·0	18·2	1·39	0·99	151	88	18	1	6	5	2	9	24	23

† Excluding population in Public Institutions (3,193 in 1914)—persons not belonging to the Borough.

‡ By Order of County Council, operative from 17th August, 1914, district reduced by 19 acres, transferred to Ormskirk.

§ 30th March, 1914, " extended by 86 acres and population of 1,360, transferred from Limehurst (R.).



TABLE I.—Continued.

URBAN DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
		Census, 1911.	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.		Phthisis Death-rate.	1 year.	1 and 2.	2 and 5.	5 and 15.	15 and 25.	25 and 45.	45 and under 65.	65 and upwards.	
						Crude Rate.	*Stand-ardized Rate.												
LEIGH (Borough).....	6359	44103	45500	1225	26.9	14.3	15.6	1.69	0.83	115	655	142	42	25	39	33	89	155	130
LEYLAND .....	3725	8088	8500	146	17.1	12.8	13.4	0.58	0.47	116	109	17	8	1	4	2	12	31	34
LITHERLAND.....	857	14795	16000	521	32.5	17.2	17.9	1.87	1.56	142	276	74	22	22	12	10	36	59	41
LITTLEBOROUGH .....	7856	11697	11953	222	18.5	14.2	15.0	1.00	0.66	112	170	25	6	3	2	9	21	50	54
LITTLE CROSBY .....	1924	844	940	29	30.8	11.7	14.0	Nil.	Nil.	68	11	2	..	1	1	1	2	1	3
LITTLE HULTON .....	1699	8103	8113	191	23.5	13.0	14.2	0.86	0.49	89	106	17	8	2	9	4	14	28	24
LITTLE LEVER .....	808	5194	5200	109	20.9	17.8	18.5	2.30	1.15	100	93	11	6	7	3	10	13	24	19
LONGRIDGE.....	3285	4340	4340	86	19.8	13.1	13.1	Nil.	1.15	174	57	15	1	..	..	3	7	9	22
LYTHAM .....	2464	9463	10075	136	13.4	13.1	12.7	1.29	0.89	80	132	11	2	5	11	4	15	26	58
MIDDLETON (Borough)	4775	27980	28750	571	19.8	14.6	15.6	1.98	1.21	126	421	72	21	27	16	23	48	115	99
MILNROW .....	5194	8584	8760	141	16.0	18.2	18.5	2.28	0.57	205	160	29	8	10	5	3	21	41	43
MORECAMBE (Borough) .....	1801	12131	14726	191	12.9	10.1	8.9	0.13	0.40	73	149	14	4	3	4	6	21	43	54
MOSSLEY (Borough)...	3624	13205	13391	259	19.2	15.1	15.2	0.89	1.04	84	203	22	5	8	3	4	35	68	58
NELSON (Borough) ...	3466	39479	41500	704	16.9	11.4	13.5	1.10	0.65	122	477	86	24	12	18	25	62	137	113
NEWTON-IN-MAKER-FIELD.....	3105	18451	19074	508	26.6	12.1	12.8	1.25	0.99	76	232	39	14	22	12	11	30	51	53

TABLE I.—Continued.

URBAN DISTRICTS.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
	Census, 1911	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Phthisis Death-rate.											
					Crude Rate.	*Stand-ardized Rate.												
NORDEN .....	3797	4000	75	18.7	13.7	13.5	2.25	0.50	93	55	7	2	4	5	3	6	11	17
†ORMSKIRK .....	7407	7566	151	19.9	17.3	17.1	0.26	1.45	105	131	16	8	2	1	9	12	34	49
ORRELL .....	6318	6424	179	27.8	18.3	19.9	3.26	0.62	217	118	39	9	2	6	6	9	23	24
OSWALDTWISTLE .....	15714	16210	361	22.2	15.7	17.2	1.41	0.92	144	255	52	18	9	7	12	25	69	63
PADIHAM .....	13635	14130	312	22.0	15.2	16.4	1.62	0.56	141	216	44	16	14	4	8	26	50	54
POULTON-LE-FYLDE ..	2424	2435	42	17.2	16.8	15.2	0.82	0.41	119	41	5	3	..	1	2	3	9	18
PREESALL .....	1718	1753	35	19.9	12.5	11.9	1.71	Nil.	85	22	3	1	..	2	1	5	5	5
†PRESCOT .....	8154	8000	221	27.6	16.1	16.6	1.00	1.37	90	129	20	6	3	7	5	17	37	34
PRESTWICH .....	§14152	§15400	300	19.4	10.8	11.6	0.45	0.64	63	167	19	3	3	6	3	35	39	59
RADCLIFFE .....	25691	26050	507	19.4	13.6	15.0	0.65	0.76	124	355	63	9	11	9	16	51	92	104
RAINFORD .....	3503	3550	105	29.5	14.9	14.9	1.69	0.28	76	53	8	3	2	4	2	5	14	15
RAMSBOTTOM .....	15146	15500	279	18.0	15.2	16.0	0.77	0.83	93	237	26	3	3	9	7	37	68	84
RAWTENSTALL (Borough) .....	30516	30600	562	18.3	14.9	15.9	0.71	0.84	88	456	50	17	17	17	10	66	126	153

† By Order of County Council, operative from 17th August, 1914, district extended by 19 acres, transferred from Lathom and Burscough.

‡

§ Excluding a population of 3,043 in County Asylum.

112 acres,

Whiston (R.).

TABLE I.—Continued.

URBAN DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.					Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.								
		Census, 1911.	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.	Phthisis Death-rate.		Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	
						Crude Rate.	*Stand-ardized Rate.												
RISHTON . . . . .	2985	7441	7800	137	17·5	12·3	14·0	0·64	0·76	94	96	13	1	3	5	3	12	33	26
ROYTON . . . . .	2147	17069	17650	430	24·3	17·6	19·0	2·20	0·96	118	312	51	11	26	19	10	46	71	78
ST. ANNES-ON-THE-SEA . . . . .	3342	9837	10787	114	10·5	9·3	9·7	0·27	0·27	105	101	12	..	1	..	4	9	29	46
SKELMERSDALE . . . . .	1942	6822	7000	199	28·4	15·5	16·2	1·00	0·57	165	109	33	4	5	4	1	9	26	27
STANDISH-WITH-LANGTREE . . . . .	3266	7280	7593	214	28·1	12·7	13·6	0·65	0·39	130	97	28	4	5	2	4	6	22	26
STRETTFORD . . . . .	3240	42496	45100	816	18·0	12·0	13·3	0·50	0·99	83	542	68	11	11	19	19	83	162	169
SWINTON AND PENDLE-BURY . . . . .	2284	30759	32065	757	23·6	13·3	15·0	1·24	1·34	142	429	108	31	20	20	15	61	90	84
THORNTON . . . . .	2996	4669	5417	125	23·0	11·0	10·5	0·36	0·73	64	60	8	1	1	4	2	10	13	21
TOTTINGTON . . . . .	2544	6769	6980	118	16·9	13·7	14·2	0·57	0·85	84	96	10	1	1	4	3	8	29	40
TRAWDEN . . . . .	6815	2963	3020	58	19·2	12·2	13·0	0·66	0·99	137	37	8	2	1	..	3	5	7	11
TURTON . . . . .	17335	12648	12720	195	15·3	12·4	13·1	0·39	1·02	66	158	13	4	3	1	8	24	48	57
TYLDESLEY-WITH-SHAKERLEY . . . . .	2490	15582	15750	436	27·6	14·2	15·7	1·46	1·20	114	225	50	21	10	8	8	28	57	43
ULVERSTON . . . . .	3172	9552	9552	213	22·2	14·1	13·0	1·88	0·62	98	135	21	7	7	2	7	14	33	44
UPHOLLAND . . . . .	4686	5233	5240	157	29·9	9·9	9·9	0·57	0·19	70	52	11	2	3	1	2	7	12	14



TABLE I.—Continued.

URBAN DISTRICTS.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.								
	Area in Statute Acres.	Census, 1911.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.		Phthisis Death-rate.	Under 1 year.	1 and 2 under 2.	2 and 5 under 5.	5 and 15 under 15.	15 and 25 under 25.	25 and 45 under 45.	45 and 65 under 65.	65 and upwards.
					Crude Rate.	*Stand-arized Rate.											
URMSTON .....	991	7912	8200	141	17.1	11.5	12.4	0.60	0.73	42	95	2	1	3	15	40	26
WALTON-LE-DALE ...	4658	12350	12352	228	18.4	13.5	14.1	0.48	0.72	114	167	2	4	6	26	44	55
WARDLE .....	3192	†3879	†3879	54	13.9	16.7	17.2	0.77	0.51	148	65	3	1	1	7	20	23
WATERLOO-WITH-SEA-FORTH .....	986	26396	29079	646	22.2	14.2	14.4	1.13	1.10	85	413	20	18	16	64	102	114
WESTHOUGHTON .....	5560	15046	15200	417	27.4	14.8	15.8	1.64	0.65	117	226	9	21	8	28	47	51
WHITEFIELD.....	1404	6967	7036	124	17.6	13.3	14.3	0.56	0.99	120	94	6	2	2	7	29	31
WHITWORTH .....	4483	8872	9000	167	18.5	14.5	15.2	0.44	1.22	125	131	2	5	5	22	41	35
WIDNES (Borough) ..	3093	31541	32572	993	30.4	17.4	18.3	2.70	1.50	127	568	52	34	22	79	115	105
WITHNELI .....	3705	3399	3410	65	19.0	11.1	11.9	0.29	0.29	123	38	2	1	..	4	10	12
WORSLEY .....	5413	13906	14380	262	18.0	11.2	12.4	0.97	0.69	129	162	8	5	8	22	27	53
TOTAL URBAN DISTRICTS .....	340196	1454654	1510813	33531	22.1	14.1	15.1	1.33	0.89	115	21415	1092	935	870	2844	5316	5601

† Excluding the number of Inmates (841) in the Union Workhouse.

**TABLE II.—DEATHS** registered during the year 1914 in the **URBAN DISTRICTS** of the Administrative County of Lancaster, classified according to Diseases and Localities, and distinguishing Deaths of Children under five years of age.

URBAN DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																											
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Group.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis)	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including suicides.	All other Diseases.	
ABRAM .....		Under 5 5 upwds	.. 1	3	1 1	1	1 1	.. ..	.. ..	.. ..	.. 2	.. 4	.. ..	.. ..	2 1	.. 6	6 6	8 4	1 3	2 1	.. ..	.. 3	.. ..	.. ..	.. 2	.. ..	.. ..	9	1 9	5 13
ACCRINGTON (Borough) .....		Under 5 5 upwds	.. 3	26	.. 1	10 1	3 6	.. 8	.. ..	.. ..	4 4	.. 49	.. 6	5 1	.. 51	.. 41	12 36	14 36	1 6	12 5	.. 1	.. 3	.. ..	.. ..	.. 19	.. 1	.. ..	42	1 18	26 166
ADLINGTON.....		Under 5 5 upwds	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. 2	.. 3	.. ..	.. 3	.. 5	.. 2	.. 3	.. ..	1 ..	1 ..	.. 1	.. 2	.. ..	.. ..	.. 5	.. ..	.. ..	1	.. 7	1 8
ASHTON-IN-MAKERFIELD ..		Under 5 5 upwds	.. 4	.. ..	4 1	1 ..	1 2	.. 2	.. ..	.. ..	7 ..	.. 22	.. ..	9 2	.. 17	6 17	14 14	1 3	14 ..	.. ..	.. ..	.. 3	.. 2	.. ..	1 6	.. ..	34	2 14	8 65	
ASHTON UNDER-LYNE (Borough)		Under 5 5 upwds	.. 6	34 1	7 7	31 1	1 3	.. 5	1 2	6 49	3 3	4 10	.. 35	.. 2	1 ..	1 68	28 66	38 36	1 7	56 7	.. 1	.. 6	.. 1	.. 10	1 ..	.. ..	37	2 24	41 186	
ASPULL .....		Under 5 5 upwds	.. 3	2	.. ..	2 ..	1 2	.. 2	.. ..	.. 4	.. ..	.. 4	.. ..	.. ..	.. 11	1 7	11 11	.. ..	.. ..	3 ..	.. ..	.. ..	.. 1	.. 4	.. 1	.. ..	5	.. 14	5 24	
ATHERTON .....		Under 5 5 upwds	.. ..	7 2	.. ..	14 ..	1 2	.. ..	.. ..	1 26	4 1	.. 13	.. 1	7 4	1 20	9 18	11 16	3 1	13 1	.. 2	.. 2	.. ..	.. ..	.. 6	.. ..	.. ..	18	1 14	7 36	
AUDENSHAW.....		Under 5 5 upwds	.. ..	2	.. 1	7 ..	.. ..	.. 1	.. ..	.. 4	4 2	.. 10	.. ..	.. ..	.. 12	3 5	5 6	.. ..	3 ..	.. 1	.. ..	.. ..	.. ..	1 2	.. ..	.. ..	8	.. 5	4 26	

TABLE II.—Continued.

Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.

URBAN DISTRICTS	Age at Death.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.		
BACUP (Borough)	Under 5 upwds	.. 3	6	1 4	8	1 1	..	.. 1	.. 27	2 1	2 3	.. 23	1 5	2 4	.. 39	15 32	13 17	2 3	4	.. 2	.. 2	.. 2	.. 1	.. 19	.. 2	.. ..	16	2 10	17 112	
BARROWFORD	Under 5 upwds	..	10 2	1	..	1	..	..	.. 2	..	..	.. 12	..	2	.. 8	2 9	4 4	..	2	..	..	..	.. 3	..	.. ..	4	..	..	4 18	
BILLINGE	Under 5 upwds	.. 1	..	..	..	1 1	..	..	.. 4	1	..	.. 4	..	2	.. 6	6 10	.. 8	..	5	..	..	.. 3	.. 1	.. 3	.. 1	.. ..	9	..	2 26	
BISPHAM WITH-NORBRECK	Under 5 upwds	..	..	..	..	..	.. 1	..	.. 1	..	..	.. 6	..	..	.. 8	.. 1	1 2	..	..	..	..	.. 1	.. 3	..	.. ..	..	..	..	.. 14	
BLACKROD	Under 5 upwds	..	..	..	..	1	..	.. 1	.. 2	1	..	.. 7	.. 1	3 1	.. 1	.. 1	3 4	..	1	..	..	..	.. 2	..	.. ..	5	..	.. 3	1 10	
BRIERFIELD	Under 5 upwds	..	6 1	..	2	2	..	..	.. 6	..	1 3	.. 9	.. 2	.. 1	.. 12	4 12	4 3	..	1	..	.. 1	..	..	.. 5	..	.. 1	7	..	.. 3	3 24
CARNFORTH	Under 5 upwds	..	..	..	..	..	1	..	.. 2	..	..	.. 3	..	..	.. 5	2 1	.. 1	..	1	..	.. 1	..	.. 2	..	.. ..	5	..	.. 1	.. 19	
CHADDERTON	Under 5 upwds	.. 3	17 1	.. 2	8	1 1	1 5	.. 1	3 28	1 9	..	.. 29	1 2	3	1 26	6 39	15 17	..	19 1	..	.. 4	.. 2	.. 2	1 23	..	.. 3	28	1 20	1 101	19 22 101
CHORLEY (Borough)	Under 5 upwds	.. 3	34 3	2 3	5	4	.. 4	..	2 21	..	4 2	1 27	.. 2	3 1	1 31	9 41	21 9	..	20 1	..	..	.. 2	..	.. 15	.. 2	.. 4	48	1 14	1 113	22 113
CHURCH	Under 5 upwds	..	1	..	4	..	..	..	.. 6	1	1	.. 7	.. 1	.. 1	.. 10	3 8	5 5	..	4 1	..	..	.. 1	..	.. 6	..	..	5	..	.. 4	5 29



TABLE II.—Continued.

		Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																											
URBAN DISTRICTS.	Age at Death.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.	
CLAYTON-LE-MOORS .....	Under 5 upwds	1	5	..	..	1	..	..	9	1	1	..	..	1	12	3	10	1	8	..	1	..	..	4	..	2	8	..	2
		1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	10	..	..	..	..	..	..	..	..	..	..	..	
CLITHEROE (Borough) ....	Under 5 upwds	1	1	..	..	1	1	..	7	1	1	4	2	..	14	4	5	1	5	..	1	..	..	17	..	12	..	5	6
		1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	
CULNE (Borough).	Under 5 upwds	3	7	..	4	..	3	1	1	1	4	32	..	..	34	8	15	3	16	4	..	..	2	2	1	21	..	4	10
		3	1	..	..	1	..	..	24	3	1	1	..	..	..	29	23	11	3	6	..	2	..	12	..	..	..	..	
CROMPTON .....	Under 5 upwds	..	..	7	1	1	4	..	16	1	2	14	..	1	2	4	11	..	..	1	..	2	..	12	..	14	3	8	7
		..	..	3	..	2	..	..	..	..	..	..	..	..	2	23	13	..	..	6	..	..	..	..	..	..	..	..	
CROSTON .....	Under 5 upwds	..	..	..	..	..	..	..	..	..	1	..	..	..	3	..	..	1	1	1	2	..	..	1	..	..	..	..	1
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
DALTON-IN-FURNESS.....	Under 5 upwds	..	5	1	14	1	2	1	15	1	1	17	..	..	12	9	7	..	..	1	..	1	..	3	..	14	..	5	3
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	4	..	..	..	..	..	..	..	..	..	..	48
DARWEN (Borough) ....	Under 5 upwds	5	2	1	6	3	6	1	29	3	2	45	1	4	1	1	17	10	1	13	3	5	..	1	6	35	2	20	23
		5	..	..	..	1	..	..	..	..	7	..	..	..	..	51	57	33	7	5	..	..	..	25	..	..	..	..	162
DENTON .....	Under 5 upwds	1	2	5	3	1	..	..	17	1	1	15	2	2	3	1	8	3	3	8	1	..	..	5	1	13	3	7	13
		1	..	2	..	..	..	..	..	..	1	1	..	..	1	25	10	12	3	..	..	..	..	..	..	..	..	..	58
DROYLSDEN .....	Under 5 upwds	2	5	1	3	1	1	1	2	3	1	1	1	..	7	3	4	4	..	11	2	1	..	7	12	..	1	7	12
		2	..	3	..	..	..	..	13	2	4	11	..	..	..	..	16	6	..	1	..	..	..	..	..	..	..	..	54
ECCLES (Borough)	Under 5 upwds	3	..	1	9	4	1	2	46	1	4	36	..	3	1	1	14	21	6	15	3	8	..	13	29	2	3	41	
		3	..	1	..	3	..	..	..	..	5	..	..	..	..	67	38	19	6	8	3	..	..	..	..	..	1	1	139

TABLE II.—Continued.

Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.

URBAN DISTRICTS.	Age at Death.	Enteric	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.	
		Fever.																											
FAILSWORTH.....	Under 5 5 upwds	.. 1	9	3 3	5 ..	1 4	.. ..	.. 1	2 17	4 2	3 2	.. 12	.. ..	1 ..	.. 15	7 26	6 14	.. ..	.. ..	9 3	.. 2	.. 1	.. 1	2 2	.. ..	.. 2	19	3 10	16 41
FARNWORTH ....	Under 5 5 upwds	.. 2	15	3 3	6 ..	.. 3	.. 3	.. ..	.. 23	4 2	7 2	.. 21	.. 4	3 1	.. 17	11 32	12 20	2 3	.. ..	22 5	.. ..	.. 4	.. 1	.. 9	.. ..	.. 2	35	2 14	109
FLEETWOOD ....	Under 5 5 upwds	.. ..	1	.. ..	5 ..	2 1	.. 1	.. ..	1 18	.. ..	.. 2	.. 14	.. ..	.. ..	.. 22	6 9	11 14	1 1	.. ..	4 ..	.. 2	.. 3	.. 2	.. 4	.. ..	.. ..	18	3 9	15 50
FORMBY .....	Under 5 5 upwds	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. 3	1 ..	.. 1	.. 3	.. ..	.. 4	.. 4	.. ..	2 8	.. 2	.. ..	3 1	.. 1	.. 4	.. 1	.. 3	.. ..	.. ..	1	1 1	.. 21
FULWOOD .....	Under 5 5 upwds	.. ..	.. ..	1 ..	.. ..	1 ..	.. 1	.. ..	.. 2	.. ..	.. 1	.. 8	.. ..	1 1	.. 16	.. 3	1 2	.. ..	.. ..	1 ..	.. 2	.. 1	.. ..	.. ..	.. 1	.. ..	3	.. 2	.. 28
GOLBORNE .....	Under 5 5 upwds	.. 2	.. ..	.. ..	2 ..	.. ..	.. ..	.. ..	.. 2	1 ..	.. 1	.. 8	.. ..	.. 1	.. 5	4 9	3 ..	.. ..	.. ..	4 2	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	8	2 3	7 17
GRANGE-OVER-SANDS .....	Under 5 5 upwds	.. ..	.. ..	.. ..	.. ..	.. ..	.. 1	.. ..	.. 1	.. 1	.. ..	.. 1	.. ..	1 ..	.. 4	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. 1	.. 1	.. ..	.. ..	.. ..	.. 3	.. 3
GREAT CROSBY ..	Under 5 5 upwds	.. ..	.. ..	.. ..	2 ..	.. 1	.. 1	.. ..	.. 7	.. ..	1 3	.. 14	.. ..	2 ..	.. 17	.. 10	2 12	.. ..	.. ..	1 1	.. 1	.. 1	.. 1	.. 7	.. 1	1	10	1 1	5 29
GREAT HARWOOD..	Under 5 5 upwds	.. ..	9	.. ..	.. 1	2 ..	.. 1	.. 1	.. 7	1 ..	4 3	.. 13	.. ..	5 ..	.. 14	1 9	6 8	.. 2	.. ..	4 ..	.. ..	.. 1	.. ..	.. 3	.. 2	.. ..	9	.. 3	7 40
HASLINGDEN (Borough) ....	Under 5 5 upwds	.. 2	4 1	1 1	1 ..	2 ..	.. 1	.. ..	1 11	1 ..	3 2	.. 32	.. 1	2 ..	.. 43	6 18	6 24	.. 5	.. ..	1 ..	.. ..	.. 2	.. ..	.. 7	.. ..	11	5 11	14 68	

TABLE II.—Continued.

URBAN DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																														
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.				
	HAYDOCK	Under 5 5 upwds	..	2	1	..	..	1	..	..	1	2	..	7	..	3	9	7	..	15	1	..	..	..	..	..	1	7	1	5	5	29	
	HEYSHAM	Under 5 5 upwds	1	..	..	..	..	..	..	..	..	..	..	..	..	9	1	3	..	..	..	1	..	..	..	..	..	2	..	..	..	25	
	HEYWOOD (Borough)	Under 5 5 upwds	..	3	1	6	2	2	..	3	4	2	6	30	3	1	15	12	1	3	1	1	..	..	..	..	3	18	..	18	..	42	121
	HINDLEY	Under 5 5 upwds	4	1	1	6	2	1	..	2	..	7	3	20	2	29	7	28	1	21	1	4	..	..	2	3	35	..	15	..	7	58	
	HORWICH	Under 5 5 upwds	3	..	..	..	1	3	1	..	..	5	15	..	2	31	1	3	..	6	..	4	..	1	10	..	16	..	5	..	9	42	
	HURST	Under 5 5 upwds	..	4	3	1	2	1	..	..	..	1	..	8	1	12	6	5	1	..	1	1	..	1	5	..	10	..	1	1	5	24	
	HUYTON-WITH-ROBY	Under 5 5 upwds	..	..	1	..	..	..	..	1	..	..	..	6	1	4	2	7	..	1	..	..	..	..	..	..	3	..	1	3	1	18	
	INCE-IN-MAKER-FIELD	Under 5 5 upwds	1	48	1	3	6	1	2	1	..	4	15	..	4	10	13	29	2	29	1	1	..	1	5	..	46	..	6	22	23	78	
	IRLAM	Under 5 5 upwds	1	1	..	..	1	..	..	..	1	1	3	..	..	8	4	5	..	2	..	..	..	..	5	..	13	..	6	..	6	26	
	KEARSLEY	Under 5 5 upwds	1	2	..	1	..	..	7	1	..	1	..	11	1	12	..	4	..	7	..	..	1	2	..	..	14	..	2	2	5	31	



TABLE II. — Continued.

Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.

URBAN DISTRICTS.	Age at Death.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.		
KIRKHAM .....	Under 5 upwds	..	..	..	2	1	.. 2	..	.. 8	.. 1	1	.. 7	..	..	.. 3	.. 1	2	..	..	1	..	..	..	.. 3	..	.. 1	2	.. 1	5	
LANCASTER (Borough) .....	Under 5 upwds	.. 2	4	1	..	1	.. 2	1	.. 54	2	3	.. 36	.. 2	5	.. 41	9	5	2	3	8	.. 2	.. 4	..	.. 14	.. 3	.. 3	25	2	15	30
LATHOM AND BURSCOUGH .....	Under 5 upwds	..	3	..	..	..	.. 1	..	1	1	1	.. 5	.. 1	..	.. 15	2	3	5	..	2	..	..	.. 1	.. 2	.. 3	..	3	.. 3	1	22
LEES .....	Under 5 upwds	..	..	1	..	2	..	..	2	.. 1	1	.. 7	..	1	.. 13	1	4	..	.. 1	3	..	..	..	.. 3	..	6	..	.. 3	4	20
LEIGH (Borough).	Under 5 upwds	.. 3	6	1	8	4	.. 6	..	.. 38	2	5	1	.. 8	7	2	19	29	2	.. 2	39	.. 1	.. 5	.. 2	2	.. 2	56	5	29	21	101
LEYLAND .....	Under 5 upwds	..	..	..	..	.. 1	.. 1	..	.. 4	..	1	.. 7	..	2	.. 13	2	7	1	2	4	..	.. 1	..	.. 2	..	5	..	.. 3	4	32
LITHERLAND .....	Under 5 upwds	.. 1	7	.. 2	..	2	1	.. 1	2	1	.. 4	.. 16	.. 1	9	1	6	19	..	1	17	.. 2	.. 3	..	.. 5	..	30	3	5	20	40
LITTLEBOROUGH .	Under 5 upwds	.. 2	4	..	..	3	.. 1	..	.. 8	.. 1	..	.. 11	..	..	.. 26	4	8	6	.. 2	1	.. 3	..	..	.. 5	..	2	..	.. 3	12	52
LITTLE CROSBY .	Under 5 upwds	..	..	..	..	..	..	..	..	..	..	..	.. 1	1	.. 1	.. 1	..	..	..	..	..	..	.. 2	..	..	1	.. 1	1	2	1
LITTLE HULTON .	Under 5 upwds	.. 2	2	..	1	..	.. 1	..	.. 4	.. 1	..	.. 5	..	1	.. 2	3	2	3	..	2	.. 1	..	..	.. 8	..	11	1	4	4	29

TABLE II.—Continued.

URBAN DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																																	
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.							
LITTLE LEVER ..	Under 5 upwds	.. 2	3	2	1	..	.. 4	..	.. 6	.. 1	2	.. 6	..	1	.. 7	1	7	1	2	..	2	..	.. 1	..	1	..	4	2	2	3						
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..					
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
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LONGRIDGE.....	Under 5 upwds	..	..	..	..	..	..	..	.. 5	..	..	.. 4	.. 2	1	.. 7	2	..	1	3	..	..	..	.. 1	..	..	..	11	..	..	..	..	..				
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LYTHAM .....	Under 5 upwds	1	..	..	..	3	..	..	.. 9	.. 1	..	.. 9	.. 1	.. 1	.. 18	.. 8	2	6	3	..	..	.. 2	.. 1	.. 2	..	8	..	..	..	..	..	..	..			
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MIDDLETON (Borough) .....	Under 5 upwds	1	6	2	1	2	.. 4	.. 2	.. 35	4	2	.. 34	.. 5	3	.. 40	4	15	17	2	15	.. 1	.. 5	.. 1	.. 2	..	34	1	..	..	..	..	..	..			
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MILNROW .....	Under 5 upwds	.. 1	9	2	2	..	.. 2	..	..	2	2	.. 14	..	..	.. 21	.. 18	11	9	..	6	..	..	.. 2	.. 3	..	4	1	..	..	..	..	..	..	..		
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MORECAMBE (Borough) .....	Under 5 upwds	..	1	..	..	..	1	3	.. 6	2	2	.. 12	..	..	.. 23	.. 6	1	2	.. 6	..	.. 1	.. 2	.. 1	.. 10	..	7	2	..	..	..	..	..	..	..	..	
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MOSSLEY (Borough) .....	Under 5 upwds	..	3	3	1	1	.. 4	..	.. 14	1	2	.. 16	.. 1	1	.. 22	8	3	8	1	2	.. 1	..	.. 1	.. 22	..	8	..	..	..	..	..	..	..	..	..	
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NELSON (Borough)	Under 5 upwds	.. 3	18	..	9	1	..	..	.. 27	3	1	.. 29	.. 5	1	.. 55	12	10	22	3	7	.. 4	.. 1	..	.. 18	..	36	3	..	..	..	..	..	..	..		
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NEWTON-IN-MAKERFIELD ..	Under 5 upwds	..	6	..	1	5	.. 1	..	.. 19	..	4	.. 7	.. 1	6	.. 9	2	7	13	1	11	.. 1	.. 1	.. 7	..	14	3	..	..	..	..	..	..	..	..		
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NORDEN .....	Under 5 upwds	..	4	1	2	..	..	..	.. 2	.. 1	.. 2	.. 7	.. 1	..	.. 5	1	.. 2	..	..	..	..	..	.. 3	..	2	1	..	..	..	..	..	..	..	..	..	
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URBAN DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																													
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	(Other) Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.			
ORMSKIRK.....	Under 5 upwds	..	1	..	1	..	..	..	11	..	1	..	4	..	1	17	7	5	..	..	1	..	..	..	5	..	1	..	7	2	4	
		..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	13	4	..	..	..	..	..	..	..	..	..	1	1	44		
		1	5	1	2	..	1	..	4	1	1	..	8	..	..	1	7	5	8	..	10	1	1	..	3	..	..	14	..	3	5	
		..	..	..	4	4	2	..	..	1	1	..	23	1	2	20	13	10	3	1	4	..	1	..	1	8	..	..	16	1	8	20
OSWALDTWISTLE .	Under 5 upwds	..	9	..	2	..	..	14	1	1	..	23	1	1	2	11	8	13	2	..	2	1	..	..	1	8	..	..	15	6	9	54
		1	15	..	4	1	2	1	8	..	1	1	12	1	2	2	17	5	1	8	..	2	1	1	4	2	..	3	..	3	9	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	3	..	..	1	..	1	..	..	3	..	1	14	
		1	..	..	1	..	..	..	1	..	..	..	2	..	1	4	1	2	1	1	..	2	1	..	1	..	..	15	..	6	54	
PADIHAM.....	Under 5 upwds	..	..	..	1	..	..	..	1	..	..	2	..	..	1	..	1	1	..	..	..	..	..	..	1	..	..	3	..	6	9	54
		1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	3	..	..	1	..	..	1	..	..	3	..	1	14	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	1	1	..	..	..	..	..	..	..	..	1	..	1	14
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	2	1	..	..	..	..	..	1	..	1	14
POULTON-LE-FYLDE .....	Under 5 upwds	..	..	..	1	..	..	..	1	..	..	2	..	..	1	..	1	1	..	..	..	..	..	..	1	..	..	3	..	6	9	54
		1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	3	3	..	..	..	..	..	..	..	3	..	1	14	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	1	14	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	1	14	
PREESALL .....	Under 5 upwds	..	..	..	1	1	..	..	..	..	1	2	..	..	..	2	1	1	..	1	..	..	..	1	..	..	1	..	6	9	54	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	1	..	6	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	6
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	6
PRESCOT .....	Under 5 upwds	..	..	..	1	..	..	..	11	1	1	10	..	2	2	7	3	4	..	6	1	1	3	..	3	..	..	..	9	1	4	39
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	5	5	..	1	3	..	..	..	..	..	..	..	4	39	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	12	5	..	1	3	..	..	..	..	..	..	..	1	4	39
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	5	..	1	1	3	..	..	..	..	..	..	..	4	39
PRESTWICH .....	Under 5 upwds	..	..	2	2	..	1	1	10	1	2	17	..	..	..	1	13	7	..	..	..	2	..	..	7	..	..	..	7	1	10	44
		2	..	2	1	..	3	..	..	..	..	..	..	..	..	11	13	11	2	..	..	2	..	..	..	..	..	..	..	10	44	
		..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	11	13	7	..	..	2	..	..	..	..	..	..	..	..	10	44
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	11	..	..	..	2	..	..	..	..	..	..	..	10	44
RADCLIFFE .....	Under 5 upwds	..	2	2	1	1	4	..	1	1	2	27	1	6	2	16	13	5	2	6	..	2	1	..	10	3	2	23	2	15	14	99
		1	..	..	1	..	4	..	..	3	1	1	27	1	2	2	16	13	5	2	3	..	2	..	..	..	..	..	..	15	99	
		..	..	..	1	..	4	..	..	1	1	2	27	1	2	2	16	13	5	2	3	..	2	..	..	..	..	..	..	15	99	
		..	..	..	1	..	4	..	..	1	1	2	27	1	2	2	16	13	5	2	3	..	2	..	..	..	..	..	..	15	99	
RAINFORD.....	Under 5 upwds	..	..	..	1	2	..	..	1	..	..	4	..	1	2	6	1	1	1	..	..	..	..	1	1	..	..	6	..	1	..	6
		..	..	..	1	3	..	..	..	..	..	..	4	..	2	2	6	1	1	..	..	..	..	2	1	..	..	..	..	1	..	6
		..	..	..	1	3	..	..	..	..	..	..	4	..	2	2	6	1	1	..	..	..	..	2	1	..	..	..	..	1	..	6
		..	..	..	1	3	..	..	..	..	..	..	4	..	2	2	6	1	1	..	..	..	..	2	1	..	..	..	..	1	..	6



TABLE II.—Continued.

Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.

URBAN DISTRICTS	Age at Death.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhilitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including suicides.	All other Diseases.	
		Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhilitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including suicides.	All other Diseases.	
RAMSBOTTOM ...	Under 5	..	..	..	..	..	.. 3	.. 1	.. 13	.. 2	1	.. 26	1	3	.. 20	2	4	4	.. 1	8	..	.. 2	..	.. 17	..	.. 1	8	.. 9	5
RAWTENSTALL (Borough) ....	Under 5	.. 1	4	2	5	4	.. 2	.. 1	.. 26	1	3	.. 34	.. 4	2	.. 42	9	10	1	1	1	..	.. 3	.. 1	.. 21	..	.. 3	22	2	18
RISHTON .....	Under 5	..	1	..	4	..	.. 1	..	.. 6	..	1	.. 2	.. 1	..	.. 15	1	2	4	.. 1	..	.. 2	..	.. 4	..	..	5	..	.. 5	3
ROYTON .....	Under 5	..	13	7	2	2	.. 2	..	1	.. 4	1	.. 16	..	1	2	3	13	3	3	8	.. 2	.. 2	..	.. 8	.. 1	.. 5	18	2	12
ST. ANNES-ON-THE-SEA .....	Under 5	..	1	..	..	..	..	..	.. 3	1	..	.. 9	..	1	.. 14	.. 8	.. 6	..	..	2	.. 2	..	..	..	..	4	..	2	1
SKELMERSDALE ..	Under 5	.. 1	2	..	..	2	.. 1	..	.. 4	..	..	.. 4	..	1	.. 15	4	3	.. 3	2	..	.. 1	..	..	..	..	14	..	..	13
STANDISH-WITH-LANGTREE .....	Under 5	..	1	..	..	2	.. 1	.. 1	.. 3	1	1	.. 1	.. 1	1	.. 4	8	7	2	..	.. 1	.. 1	..	.. 4	..	..	12	..	..	9
STRETTFORD .....	Under 5	.. 2	1	1	2	1	1	.. 6	.. 45	1	2	.. 67	.. 2	1	.. 54	6	9	3	9	.. 4	.. 2	.. 3	.. 23	..	.. 5	29	3	21	
SWINTON AND PENDLEBURY ..	Under 5	.. 2	.. 1	5	12	1	.. 3	.. 1	4	2	14	1	.. 3	2	.. 38	5	33	..	18	..	.. 1	.. 3	..	1	..	37	5	19	
THORNTON .....	Under 5	..	2	..	..	..	.. 5	..	.. 4	..	..	.. 3	..	..	.. 4	1	1	5	..	..	.. 2	..	.. 2	..	.. 3	4	.. 6	2	

TABLE II.—Continued.

Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.

URBAN DISTRICTS.	Age at Death.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.			
TORTINGTON . . . .	Under 5 upwds	..	..	1	..	1	2	..	6	1	2	11	..	..	16	3	1	..	..	1	1	..	..	2	..	5	..	..	1		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	..	..	1	..	..	..	..	..	..	..	31		
TRAWDEN . . . . .	Under 5 upwds	2	..	..	..	..	..	..	3	..	..	1	..	..	1	3	1	..	1	..	1	..	1	..	3	3	..	2	3		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	9		
TURTON . . . . .	Under 5 upwds	..	..	..	2	..	..	..	13	1	1	13	1	..	10	1	3	..	1	2	..	..	..	3	..	4	..	3	3		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	14	..	1	..	..	..	..	..	..	..	11	52		
TYLDESLEY-WITH-SHAKERLEY . . .	Under 5 upwds	3	2	2	1	2	..	..	19	5	3	9	1	2	9	7	16	18	..	11	2	1	..	1	..	21	..	15	11	11	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	5	..	5	..	..	..	..	..	..	..	..	40		
ULVERSTON . . . . .	Under 5 upwds	..	2	..	10	..	1	2	5	..	2	15	..	..	17	6	4	6	..	1	1	..	..	4	..	5	..	1	1	37	
		..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	5	3	..	5	1	..	..	..	..	..	..	4	..	..	
UPHOLLAND . . . . .	Under 5 upwds	..	1	..	..	..	1	..	1	..	2	..	..	..	6	2	1	3	..	2	..	1	..	5	..	3	..	2	2	3	3
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	3	3	15	
URMSTON . . . . .	Under 5 upwds	2	..	..	..	1	..	..	5	1	1	9	..	..	8	1	..	6	..	1	..	1	1	..	..	1	..	1	2	1	3
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	..	1	..	..	1	..	..	..	..	2	2	39	
WALTON-LE-DALE	Under 5 upwds	1	..	1	..	1	2	..	9	1	2	13	..	2	24	6	5	5	..	2	1	..	..	8	..	4	..	..	4	9	9
		..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	11	11	..	..	1	..	..	..	..	..	..	4	4	46	
WARDLE . . . . .	Under 5 upwds	..	..	..	1	1	1	1	2	1	..	5	1	..	7	1	1	2	..	1	1	..	..	4	..	5	..	..	2	1	1
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	..	1	..	..	..	..	..	..	2	2	22	
WATERLOO-WITH-SEAFORTH . . . .	Under 5 upwds	2	5	2	1	3	2	2	30	2	2	33	..	2	2	4	12	22	..	13	2	2	1	7	..	19	..	1	1	23	23
		..	1	1	..	2	4	5	..	..	..	..	..	..	..	38	10	22	7	3	..	..	..	..	..	..	..	3	3	137	

TABLE II.—Continued.

URBAN DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																										
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including suicides.	All other Diseases.
WESTHOUGHTON .	Under 5 upwds	.. 2	8 1	1 ..	2 ..	5 ..	.. 9	.. 1	.. 10	.. 1	2 2	.. 12	.. ..	1 ..	.. 7	1 19	12 15	.. ..	6 ..	.. 3	.. 2	.. ..	.. 3	.. 1	.. 2	32 ..	1 16	8 41	
		.. ..	1 ..	.. ..	.. ..	.. 1	.. 1	.. ..	.. 6	.. ..	.. ..	1 8	.. ..	.. ..	.. ..	1 13	1 7	8 5	.. ..	1 1	.. 1	.. ..	.. 3	.. ..	.. ..	8 ..	1 ..	1 23	
		.. ..	3 ..	.. ..	.. ..	1 ..	.. 1	.. 1	.. 9	.. 11	3 ..	.. ..	.. ..	.. 1	1 1	.. 12	2 7	2 6	.. ..	.. ..	.. ..	.. ..	.. 9	.. 1	.. 1	9 ..	.. 5	7 38	
WIDNES(Borough)	Under 5 upwds	.. ..	21 1	2 ..	14 1	3 ..	.. 8	.. ..	.. 49	2 ..	1 2	.. 34	.. 3	6 2	.. 28	14 41	42 27	.. 10	31 15	.. ..	.. ..	.. 1	.. ..	.. 3	.. 2	45 ..	3 12	29 102	
		.. ..	1 ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. 3	.. ..	1 ..	.. ..	.. ..	.. ..	.. 9	.. ..	.. ..	6 2	.. 1	.. ..	.. ..	.. 2	.. ..	.. ..	.. ..	2 ..	.. 1	1 7	
		.. ..	.. ..	.. 2	7 ..	.. ..	1 3	.. ..	.. 10	3 1	.. 2	.. 11	.. ..	.. 1	.. 15	5 9	11 8	1 1	5 ..	.. 1	.. ..	.. 1	.. 1	.. 5	.. ..	6 ..	.. 6	8 38	
TOTAL URBAN DISTRICTS ....	Under 5 upwds	1 451 110 22	84 71	293 12	112 83	10 171	4 43	42 1315	110 82	147 178	4 1439	5 100	162 80	21 1884	481 1622	787 1032	37 166	658 117	1 88	19 709	.. 45	.. 145	.. 45	19 709	.. 48	10 126	1412 1	112 707	922 5134



TABLE III.—DEATHS registered during the year 1914 in the RURAL DISTRICTS of the Administrative County of Lancaster, classified according to Ages and Localities, and showing also the Area and Population of such Localities, and the Birth-rate and Death-rates during the year.

NOTES.—The Area and "Census" Population of each District are taken from the Census Return.  
The Births and Deaths in each District are corrected by the inward and outward transfers supplied by the Registrar-General.  
\*Death-rate corrected for differences in age and sex constitution by "factor" supplied by Registrar-General.

RURAL DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
		Census, 1911.	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.		Phthisis Death-rate.	1 year.	1 and under 2.	2 and under 3.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	
						Crude Rate.	*Stand-ardized Rate.												
BARTON-UPON-IRWELL.....	6793	9270	9752	197	20.2	11.3	11.5	0.61	0.61	96	111	19	2	5	3	6	9	26	41
BLACKBURN .....	20150	†8920	†8920	191	21.4	13.3	13.8	0.67	0.67	89	119	17	2	3	1	6	15	30	45
BURNLEY .....	41774	19848	20500	346	16.8	12.7	13.6	1.21	0.63	112	261	39	14	12	12	16	36	79	53
BURY.....	12016	9043	9330	182	19.5	13.5	14.0	0.64	0.64	98	126	18	..	1	9	7	18	33	40
CHORLEY.....	39988	21493	22300	513	23.0	12.7	13.2	0.62	0.71	124	284	64	6	8	5	14	34	78	75
CLITHEROE (Lanca-shire portion).....	32168	6342	6342	124	19.5	11.1	10.7	0.63	0.63	64	71	8	4	2	1	1	7	24	24
FYLDE .....	38768	11578	12240	250	20.4	10.2	10.1	0.32	0.40	80	126	20	4	4	2	8	10	31	47
GARSTANG.....	57380	10691	10691	210	19.6	11.6	10.5	0.56	0.09	66	125	14	4	..	1	7	13	32	54
LANCASTER .....	54503	9085	9230	162	17.5	12.8	11.4	0.32	0.54	67	119	11	2	2	2	5	16	24	57
LEIGH .....	11574	10077	10330	278	26.9	12.4	12.9	0.96	0.77	115	129	32	5	6	9	4	16	21	36
‡LIMEHURST .....	4689	10566	9370	249	26.5	15.9	16.6	2.56	1.17	136	149	34	13	6	10	7	18	29	32

† Population in Public Institutions of persons not belonging to the district excluded.  
+ By Order of County Council, operative from 30th March, 1914, district reduced by 86 acres and population of 1,360, transferred to Lees.

TABLE III.—Continued.

RURAL DISTRICTS.	Area in Statute Acres.	Population at all ages.		Regis-tered Births.	Annual Rates per 1000 of estimated population.				Rate of Infant Mortality measured by the proportion of deaths under 1 yr. to 1000 births.	Mortality from all causes at subjoined ages.									
		Census, 1911.	Estimate to middle of 1914.		Birth-rate.	Death-rate.		Death-rate from the seven principal Epidemic Diseases.		Phthisis Death-rate.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	
						Crude Rate.	*Stand-ardized Rate.												
LUNESDALE .....	76267	6882	6882	127	18·4	12·2	11·3	0·43	0·72	47	84	6	2	..	1	6	13	25	31
PRESTON .....	52929	†18760	†18760	396	21·1	12·6	12·3	0·63	0·95	78	237	31	8	6	5	11	30	58	88
SEFTON .....	14867	5953	5953	114	19·1	10·7	10·8	0·16	0·83	70	64	8	2	1	2	4	8	20	19
†ULVERSTON .....	127549	17019	17020	332	19·5	12·6	10·9	0·58	0·64	48	216	16	4	3	8	13	28	48	96
WARRINGTON .....	19355	†11582	†12759	294	23·0	10·1	10·5	0·94	0·86	78	130	23	7	5	6	5	14	31	39
WEST LANCASHIRE .	61555	20683	20951	407	19·4	13·0	12·7	0·85	0·57	127	273	52	7	11	12	12	28	58	93
§WHISTON .....	31179	†18717	†19724	455	23·0	13·5	13·5	1·01	1·01	105	267	48	12	10	16	7	44	54	76
WIGAN .....	11695	6327	6422	149	23·2	13·3	13·3	0·62	0·46	134	86	20	3	2	4	7	6	29	15
TOTALS :—																			
RURAL DISTRICTS	715199	232806	237476	4976	20·9	12·5	12·3	0·79	0·69	96	2977	480	101	87	109	146	363	730	961
URBAN DISTRICTS	340196	1454654	1510813	33531	22·1	14·1	15·1	1·33	0·89	115	21415	3858	1092	935	870	899	2844	5316	5601
ADMINISTRATIVE COUNTY.....	1055395	1687460	1748289	38507	22·0	13·9	14·7	1·25	0·87	112	24392	4338	1193	1022	979	1045	3207	6046	6562

† Population in Public Institutions of persons not belonging to the district excluded.

‡ By Order of County Council, operative from 1st April, 1914, district reduced by 322 acres and population of 26, transferred to Grange.

§ 17th August, 1914, 112 acres, transferred to Prescott.

**TABLE IV.—DEATHS** registered during the year 1914 in the **RURAL DISTRICTS** of the Administrative County of Lancaster, classified according to Diseases and Localities, and distinguishing Deaths of Children under five years of age.

RURAL DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																											
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phtisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.	
BARTON-UPON-IRWELL .....	Under 5 upwds	..	..	2	2	..	2	..	6	..	1	12	..	..	1	10	2	2	..	2	1	..	..	1	..	6	1	9	1	9
	Under 5 upwds	..	1	..	..	1	..	..	6	..	2	13	1	..	20	13	2	2	1	2	..	..	..	1	..	4	1	9	3	32
	Under 5 upwds	1	10	3	..	2	2	..	13	2	1	11	5	..	38	19	8	21	1	5	1	..	..	..	10	3	15	13	54	
	Under 5 upwds	..	..	..	..	3	..	..	..	6	..	1	10	1	..	18	8	3	7	3	1	2	..	..	3	2	9	..	38	
CHORLEY.....	Under 5 upwds	2	..	..	..	2	6	1	16	2	2	21	3	..	42	17	10	11	2	9	1	..	..	6	1	24	1	23	11	62
	Under 5 upwds	..	..	3	1	..	..	..	4	..	1	5	..	..	9	4	1	5	2	..	..	..	..	4	..	3	..	5	2	21
FYLDE .....	Under 5 upwds	..	1	..	1	2	2	..	5	..	1	11	3	..	10	5	3	5	4	..	..	..	..	1	1	12	..	7	5	42
	Under 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..



TABLE IV.—Continued.

RURAL DISTRICTS.		Age at Death.	Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																			All other Diseases.										
			Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, malignant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.		Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy & Parturition.	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.			
GARSTANG.....	Under 5 upwds	..	1	..	1	..	..	1	..	..	..	..	..	..	..	18	2	..	..	4	..	..	..	1	..	..	6	..	8	2		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
LANCASTER .....	Under 5 upwds	..	..	..	1	..	..	..	..	..	2	..	..	..	..	12	2	..	..	2	..	..	..	..	1	..	4	..	4	..	3	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
LEIGH .....	Under 5 upwds	..	..	..	3	1	..	..	..	..	1	..	..	..	..	5	3	7	1	3	..	..	..	..	..	13	..	..	2	6	7	
		2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
LIMEHURST .....	Under 5 upwds	..	7	2	4	..	..	..	1	..	..	..	..	..	..	17	8	12	..	1	..	..	..	..	..	6	..	..	1	3	10	
		1	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
LUNESDALE .....	Under 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	1	..	..	1	..	..	1	..	4	..	..	..	..	2	38
		1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
PRESTON .....	Under 5 upwds	..	1	1	1	1	..	..	..	..	3	..	..	..	..	26	5	3	2	4	..	..	..	..	16	..	..	2	7	4	75	
		..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SEFTON .....	Under 5 upwds	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	6	..	..	..	7	1	17	
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ULVERSTON .....	Under 5 upwds	..	1	..	3	..	..	..	..	..	..	..	..	1	..	29	4	1	..	1	..	..	..	..	4	..	..	..	9	6	67	
		1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WARRINGTON ...	Under 5 upwds	..	1	..	..	2	..	..	..	..	..	..	..	1	..	13	1	8	..	8	..	..	..	..	5	..	..	1	9	6	30	
		1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WEST LANCASHIRE	Under 5 upwds	..	1	1	5	1	..	..	..	..	..	..	..	4	1	27	9	7	..	3	..	..	..	..	19	..	..	1	9	15	77	
		1	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE IV.—Continued.

		Mortality from subjoined causes, distinguishing Deaths of Children under five years of age.																											
		Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Group.	Influenza.	Erysipelas.	Phthisis (Pul. Tuberculosis.)	Tuberculous Meningitis.	Other Tubercu- lous Diseases	Cancer, malign- ant disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Other Diseases of Respiratory Organs	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Preg- nancy & Parturition	Congenital Debility, Malformation, Premature Birth.	Violent deaths, including Suicides.	All other Diseases.	
RURAL DISTRICTS.	Age at Death.	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds
	WHISTON .....	..	3	1	..	3	..	..	20	2	2	14	1	2	24	14	16	..	3	5	..	4	..	..	..	17	4	12	
WIGAN .....	Age at Death.	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds
	WHISTON .....	2	1	..	..	..	1	..	3	..	1	2	..	..	8	2	3	..	..	1	..	..	..	..	8	1	9		
TOTALS :— RURAL DISTRICTS.	Age at Death.	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds
	WHISTON .....	12	4	9	..	22	34	2	164	6	24	225	16	9	332	178	88	29	16	51	..	16	6	86	5	176	18	147	
URBAN DISTRICTS.	Age at Death.	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds
	WHISTON .....	110	22	71	12	83	171	43	1315	82	178	1439	100	80	1884	1622	1032	166	117	88	145	45	709	48	126	1	707	5134	
ADMINISTRATIVE COUNTY.....	Age at Death.	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds	Under 5	5 upwds
	WHISTON .....	122	26	80	12	105	205	45	1479	88	202	1664	116	89	2216	1800	1179	195	133	97	161	51	795	53	147	1	824	5954 <sup>†</sup>	

No deaths from Small-pox, Typhus Fever, or Cholera.

\* Includes 208 suicides.

† Comprises "other defined diseases" 6,230 (including 4 deaths from Acute Poliomyelitis, and 7 deaths from Cerebro-Spinal Fever) and 793 deaths from diseases "ill defined or unknown."

TABLE V.—DEATHS and CASES NOTIFIED (or ascertained) in the County Districts during the Year ending Dec. 31st, 1914.

\* NOTE.—These figures represent the totals of the Returns supplied Quarterly, and not the totals of the Annual Report Statistics.

MONTH.	Diphtheria & Mem. Croup.		Erysipelas.		Scarlet Fever.		Enteric Fever.		Puerperal Fever.		Measles.		Chicken Pox.		Whooping Cough.		Ophthalmia Neonatorum.		Acute Poliomyelitis.		Cerebro-Spinal Fever.		Total of preceding columns.		Tuberculosis.				Deaths from			Deaths from all Causes.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.		Deaths.
Jan. ..	186	23	116	4	575	5	54	8	12	3	17	5	20	..	14	10	..	990	63	247	113	106	26	22	522	16	762						
Feb. ..	173	26	101	5	611	14	56	4	21	9	191	14	77	5	26	20	..	1259	99	286	113	92	42	22	458	19	753						
March..	185	19	106	1	714	10	64	14	14	2	228	22	120	46	38	20	..	1502	108	301	101	123	46	27	455	28	765						
April ..	125	10	95	2	591	14	43	6	19	6	71	53	38	27	41	44	..	1058	135	293	123	115	49	16	437	27	787						
May ..	119	10	102	3	664	9	45	8	4	5	150	58	37	55	51	26	..	1210	145	304	126	139	50	10	319	22	672						
June ..	93	16	101	4	587	6	36	9	10	4	157	81	36	140	35	36	..	1202	156	226	99	107	31	24	284	9	603						
July ..	134	17	97	1	593	8	64	3	11	4	80	39	6	71	28	30	1	1089	101	265	91	100	33	66	208	4	503						
August.	114	14	101	1	561	10	50	8	8	2	41	39	2	26	22	17	..	6923	697	205	103	70	42	91	200	3	536						
Sept. ..	109	16	83	3	597	9	74	9	10	5	4	28	12	42	25	22	..	956	96	234	95	65	25	202	192	13	623						
Oct. ..	158	13	124	4	939	7	51	6	13	6	171	54	8	33	12	20	..	1522	103	199	104	80	35	83	244	9	578						
Nov. ..	156	21	121	3	927	15	60	6	10	4	133	42	34	60	11	14	..	1515	102	220	105	63	27	36	303	8	581						
Dec. ..	170	15	126	7	826	7	61	11	9	5	72	50	38	20	15	27	..	1349	110	238	111	80	23	16	421	21	702						
*Year ..	1722	200	1273	38	8185	114	658	92	141	55	1315	485	428	2	525	318	286	1	17	4	7	5	14575	1315	3018	1284	1140	429	615	4043	179	7865	

† Compulsorily notifiable in 2 districts. ‡ Temporarily notifiable in a few districts. § Reported voluntarily in a few districts. a Small-pox—March and July each 2 cases, May 6, June 4; total 14 cases. b Continued fever—May, July, October each 1 case, August 1 case (fatal); total 4 cases 1 death.



## \*EXTRACT FROM THE METEOROLOGICAL REPORT

BY THE

REV. W. SIDGREAVES, S.J., F.R.A.S.,

*Of Stonyhurst College Observatory.*SUMMARY OF OBSERVATIONS  
FOR 1914.

Results of Observations taken during the Year.					Mean for the last 67 years.
<i>Readings of Barometer in inches.</i>					
Mean of the year	...	...	...	29·452	29·493
Highest Monthly Mean (January)	...	...	...	29·707	29·748
Lowest „ „ (December)	...	...	...	29·040	29·223
Highest Reading (January)	...	...	...	30·231	30·294
Lowest „ „ (February)	...	...	...	27·992	28·206
Range	...	...	...	2·239	2·088
<i>Thermometer, Fahrenheit.</i>					
Highest Monthly Mean Temperature	(July and August)			58·9	58·6
Lowest „ „ „	(January)			38·8	35·5
Highest Reading of a Max. Therm.	(July 21st)			82·5	81·7
Lowest Reading of a Min. Therm.	(November 21st)			21·1	15·8
Range of Thermometer Readings	...	...	...	61·4	65·9
Mean of Highest Daily „	...	...	...	54·7	54·6
Mean of Lowest Daily „	...	...	...	42·7	40·9
Mean Daily Range	...	...	...	12·0	13·7
Deduced Mean Temperature (from mean of Max. and Min.)	...	...	...	47·7	46·8
Mean Temperature from Dry Bulb	...	...	...	49·1	47·0
Adopted Mean Temperature of the Year.	...	...	...	48·4	46·9
Mean Temperature of Evaporation	...	...	...	45·8	44·6
Mean Temperature of Dew Point	...	...	...	42·9	42·1
Mean elastic force of Vapour	... inches	...	...	0·284	0·274
Mean weight of Vapour in a cubic foot of air	...	...	...	3·2	3·2
Mean additional weight required for saturation	...	...	...	0·8	0·7
Mean degree of Humidity (saturation 100)	...	...	...	82	83

\* Introduced by kind permission.

Results of Observations taken during the Year.				Mean for the last 67 years.
Mean weight of a cubic foot of air.. grains	536.7			539.1
Mean amount of Cloud (0—10) ... ..	6.5			7.3
Total fall of Rain . ... ..inches	50.177			47.064
Greatest Monthly Rainfall (Nov.) ,,	8.045			7.488
Least ,, ,, (April) ,,	1.470			1.224
Greatest Rainfall in one day (Jan. 8th) ,,	2.074			1.630
No. of days per Month on which .005 inch or more Rain fell ... ..	18.2			17.1

## SUMMARY OF WIND.

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
No. of days in the year on which the prevailing wind was	37	49	25	15	39	84	101	15
Mean Velocity in miles per hour ...	4.9	6.1	8.4	8.8	12.5	10.8	11.1	11.4
Total No. of miles for each direction .	4313	7115	5061	3166	11690	21754	26948	4100

				Mean for the last 47 years.
Total No. of miles registered ... ..	84147			86533.2
Greatest Monthly Total (February) ...	9854			10050.1
Least ,, ,, (October) ...	4701			5065.2
Greatest hourly velocity (Feb. 22nd) ...	44			51.8
Prevailing Direction of Wind ... ..	W			W

## DIFFERENCES, 1914.

The signs + and — mean respectively above and below  
the YEARLY average.

Mean barometric pressure ... ..	—	0.041 in.
Yearly range ,, ... ..	+	0.151 ,,
Mean of highest daily temperatures ... ..	+	0.1°
Mean of lowest ,, ,, ... ..	+	1.8°
Mean daily range ... ..	—	1.7°
Adopted mean temperature ... ..	+	1.5°
Total rainfall ... ..	+	3.113 in.

## ABSOLUTE EXTREMES FOR THE LAST 67 YEARS.

*Readings of Barometer, in inches.*

Highest monthly mean	...	...1891 (Feb.)	...	29·997
Lowest	„	„	...1868 (Dec.)	... 28·984
Highest yearly	„	...	...1896	... 29·584
Lowest	„	„	...1872	... 29·319
Greatest monthly range	...	...1886 (Dec.)	...	2·795
Least	„	„	...1852 (July)	... 0·505
Highest reading	...	...	...1896 (Jan. 9)	... 30·597
Lowest	„	...	...1886 (Dec. 8)	... 27·350
Extreme range	...	...	...	3·247

*Thermometer, Fahrenheit.*

Highest monthly mean temperature	1901 (July)	...	63·2
Lowest	„	„	...1855 (Feb.)
Highest yearly	„	„	...1868
Lowest	„	„	...1879
Highest reading	„	„	...1901 (July 20)
Lowest	„	„	...1881 (Jan. 15)

*Weight of Vapour in a cubic foot of air (grains).*

Greatest monthly mean	...	...1852 (July)	...	5·1
Least	„	„	...1855 (Feb. and on other dates)	... 1·4

*Rainfall, in inches.*

Greatest Rainfall in one day	...	1866 (Nov. 16)	...	3·700
Greatest        „        „        month	...	1870 (Oct.)	...	13·437
Least        „        „        „	...	1859 (May)	...	0·249
Greatest        „        „        year ...	...	1866	...	62·093
Least        „        „        „        ...	...	1887	...	31·250
Days on which ·005 in. or more Rain fell :				
Greatest No. in one month	...	1890 (Jan.)	...	30
Least        „        „        ...	...	1852 (Mar.)	...	3
Greatest        „        year	...	1872	...	281
Least        „        „	...	1855	...	135

*Wind (Record dates from 1867 only).*

Greatest hourly velocity, in miles	...	...1894 (Dec. 22)	...	72
Greatest No. of miles registered in a month	...	...	...1888 (Nov.)	... 12813
Least	„	„	...1888 (Sept.)	... 3261
Greatest Mean No.	„	„	...March	... 8602
Least	„	„	...September	... 6097
Greatest No.	„	„	year 1868	... 102395
Least	„	„	„ 1909	... 77165





## TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY.

*Continued.*

1914.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Monthly Total.	Percentage each month
January	...	0	0.1	0	0	0.4	0.6	0	4.2	0.9	0	0	0	0	15.8	5.1
February	...	2.2	0	0.5	4.7	4.4	2.9	4.5	0	3.4	0	0	0	0	52.1	19.2
March ...	...	4.4	2.8	2.6	3.2	6.1	0	0.1	3.7	7.3	3.0	0	5.5	0	78.9	21.6
April ...	...	10.5	12.0	10.4	9.0	7.7	9.4	0	8.6	13.1	11.0	6.4	3.0	0	194.8	46.5
May ...	...	10.6	0.3	2.2	3.7	3.1	0	3.0	5.0	13.4	2.2	0	4.0	3.4	129.2	26.2
June ...	...	3.5	14.4	9.8	3.2	4.6	5.7	9.4	8.5	5.4	2.6	0.6	14.0	0	196.0	38.6
July ...	...	1.5	1.3	3.0	11.1	3.8	0	1.1	5.8	4.8	4.1	1.7	5.4	0	118.1	23.2
August	...	2.3	5.5	2.5	4.5	3.5	5.2	9.7	6.2	10.1	10.6	0.1	2.9	0	190.7	41.7
September	...	7.9	7.4	8.2	7.2	6.5	7.1	8.9	0.3	7.2	1.7	9.7	8.7	0	176.5	46.6
October	...	0.3	0	2.8	1.6	0.1	4.7	0	2.3	6.0	3.5	3.6	1.0	0	63.4	19.4
November	...	3.7	0	1.9	4.8	0	1.1	0	0	0	0.8	0	2.0	0	53.2	20.8
December	...	3.3	0	0.5	0	3.5	2.4	0	1.0	1.3	0	1.6	0	1.0	25.4	11.0

## MONTHLY TOTALS FOR EACH HOUR OF RECORDED SUNSHINE.

Local apparent time.	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
January ...	...	...	...	...	...	1.7	2.7	3.4	3.2	3.4	1.3	0.1	...	...	...	...	...
February ...	...	...	...	...	1.8	7.3	9.8	9.6	9.1	6.6	5.8	2.0	0.1	...	...	...	...
March ...	...	...	...	2.5	9.7	11.2	9.7	10.1	8.7	8.1	7.1	6.5	4.4	0.9	...	...	...
April ...	...	1.2	5.0	12.2	17.7	18.0	18.7	18.7	18.8	19.7	18.5	17.3	12.9	11.9	4.2	...	...
May ...	...	2.5	5.6	8.3	10.1	9.1	8.9	10.4	11.2	12.3	12.7	11.0	10.5	9.0	5.4	2.0	...
June ...	...	9.1	13.2	13.9	14.6	14.9	12.8	11.0	12.6	13.7	14.5	15.9	14.2	14.2	12.3	7.7	...
July ...	...	4.3	7.8	10.8	10.5	9.2	8.7	6.8	7.0	7.8	6.5	8.2	9.6	9.9	7.1	3.6	...
August ...	...	1.1	8.1	12.7	14.3	13.2	13.4	16.1	17.5	16.4	16.7	18.6	18.2	14.6	9.3	0.5	...
September ...	...	...	1.8	8.1	15.3	18.4	17.0	20.6	19.6	20.8	18.4	17.9	14.4	4.1	0.1	...	...
October ...	...	...	...	...	1.9	7.3	8.8	8.7	8.6	9.5	8.5	7.4	2.4	0.3	...	...	...
November ...	...	...	...	...	1.9	5.3	9.2	9.1	8.5	8.8	7.2	3.2	...	...	...	...	...
December ...	...	...	...	...	...	1.6	6.2	7.2	7.1	2.6	0.7	...	...	...	...	...	...
Total ...	1.9	18.2	41.5	68.5	97.8	117.2	125.9	131.7	131.9	129.7	117.9	108.1	86.7	64.9	38.4	13.8	...